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UNITED STATES DEPARTMENT OF AGRICULTURE

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WM. A. TAYLOR, Chief

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TESTING GRAPE VARIETIES IN THE VINIFERA REGIONS OF THE UNITED STATES.

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INTRODUCTION.

A résumé of the viticultural investigations in the Vinifera regions of the United States up to 1910 was reported in Bulletin 172 of the Bureau of Plant Industry. The present publication supplements that bulletin and gives additional data on the investigations then under way, as well as reports upon researches started since the date of that publication. The fundamental problems of the Vinifera region, as determined by the early surveys, were found to require (1) a comprehensive test of the resistant varieties of vines to determine their adaptability to the different soils and climatic conditions; (2) a study of the congeniality of Vinifera varieties to the different resistant-stock varieties; (3) a study of the behavior of fruiting varieties to determine those best adapted to the different localities; and (4) a consideration of all classes of grapes with reference to their resistance to destructive insects and diseases and, if found necessary, the origination of an entirely new class of grapes better adapted to

Pacific coast conditions. These questions still remain the broad cardinal problems, but the facilities for their solution have been much enlarged and a number of subordinate problems that developed in the prosecution of the work have been taken up as far as the means and facilities of the Department of Agriculture permitted.

COOPERATIVE EXPERIMENT VINEYARDS AND THEIR NATURE.

To afford facilities for solving these problems, the Bureau of Plant Industry has established 12 experiment vineyards on the Pacific coast. One of these is at the Plant Introduction Field Station, Chico, Cal., and 11 are located in various other grape-growing centers in cooperation with growers.

A brief description of the purpose, location, soil, and climatic conditions at or near each of these vineyards follows. (Fig. 1.) Those desiring correlation and mechanical analyses of the soils and fuller climatic data are referred to Bulletin 172 of the Bureau of Plant Industry. The soil descriptions are from data furnished by the Bureau of Soils, while the weather data are taken from records furnished by the San Francisco office of the Weather Bureau, through Prof. McAdie, and from observations made in the experiment vineyards.

MAIN VINEYARDS.

Three primary vineyards of 20 acres each are located near Oakville, near Fresno, and at Guasti, Cal.

At the Oakville, Fresno, and Guasti experiment vineyards viticultural material introduced from foreign countries is tested. In these vineyards the adaptability to different localities and the value of grape varieties for different uses is determined; the relative resistance of grape varieties to destructive insects and diseases is inquired into; the congeniality of grape varieties to the different resistant sorts is determined; and grape varieties not now grown in the Vinifera regions of this country are tested, with a view to the possibility of their supplanting some of the varieties now grown. Experiments to determine how the various varieties should be propagated, grafted, pruned, trained, and otherwise cared for are under way. These vineyards offer some opportunity for the broad viticultural research and experimental work that is needed, and furnish practical object lessons in viticulture and facilities for solving some of the many commercial problems of the industry.

OAKVILLE EXPERIMENT VINEYARD.

The Oakville Experiment Vineyard (Pl. I, fig. 1) was established in the spring of 1903, and is located 1 mile west of Oakville, Napa Co., Cal., on the property of the To-Kalon Vineyard Company, at an elevation of 161 feet above sea level. The soil is a dark-brown or black gravelly clay loam or heavy loam, containing a large quantity of organic matter formed in a swamp or lagoon extending in past geological ages up Napa Valley from San Pablo Bay, typical of the greater part of the soils in the valley floor. On weathering, the shales, sandstones, limestones, lime conglomerates, and large quantities of usually lenticular or angular gravel with little erosion of edges are washed down from the steep hills or mountains surrounding Napa Valley on all sides except the south, and tend to form a heavy or clayey soil with only small quantities of sand. No hardpan or alkali appears. The surface is undulating, affording a fairly rapid run-off of surplus rainwater, though in places the subsoil is quite wet during the spring months. No irrigation is necessary. The clay and silt in the subsoils greatly aid in retaining moisture in spite of the large quantity of

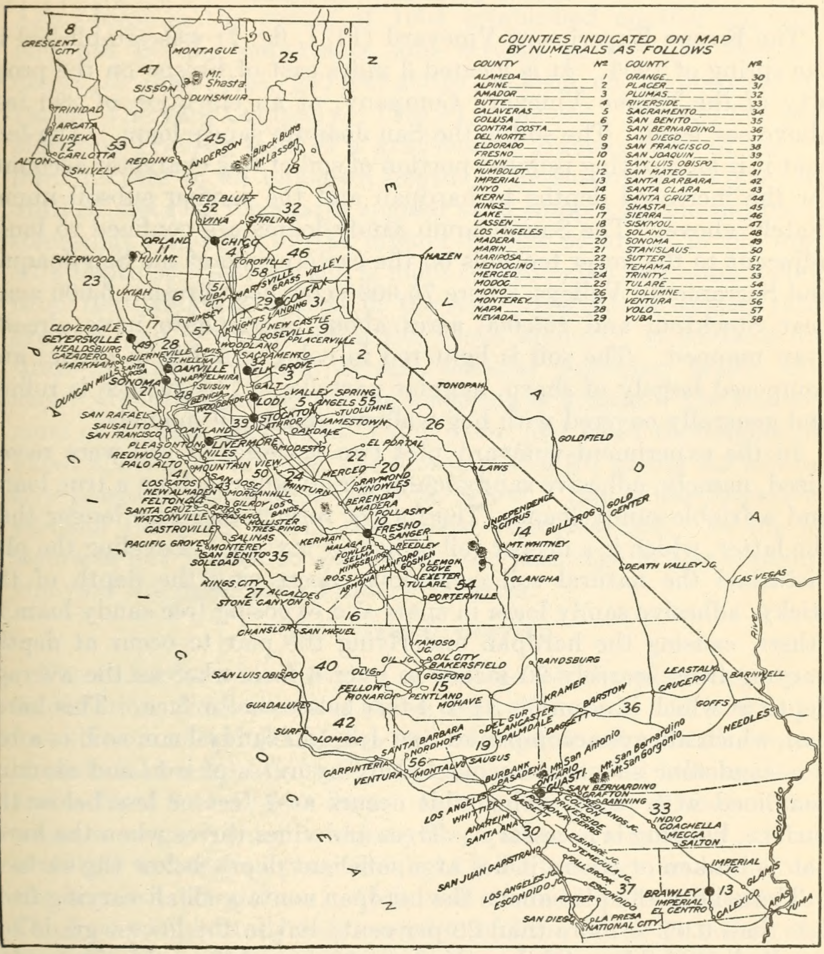
COUNTIES INDICATED ON MAP BY NUMERALS AS FOLLOWS
COUNTY Nº
ALAMEDA 1
ALPINE 2
AMADOR 3
BUTTE 4
CALAVERAS 5
COLUSA 6
CONTRA COSTA 7
DEL NORTE 8
ELDORADO 9
FRESNO 10
GLENN 11
HUMBOLDT 12
IMPERIAL 13
INYO 14
KERN 15
KINGS 16
LAKE 17
LASSEN 18
LOS ANGELES 19
MADERA 20
MARIN 21
MARIPOSA 22
MENDOCINO 23
MERCED 24
MODOC 25
MONO 26
MONTEREY 27
NAPA 28
NEVADA 29
COUNTY Nº
ORANGE 30
PLACER 31
PLUMAS 32
RIVERSIDE 33
SACRAMENTO 34
SAN BENITO 35
SAN BERNARDINO 36
SAN DIEGO 37
SAN FRANCISCO 38
SAN JOAQUIN 39
SAN LUIS OBISPO 40
SAN MATEO 41
SANTA BARBARA 42
SANTA CLARA 43
SANTA CRUZ 44
SHASTA 45
SIERRA 46
SISKIYOU 47
SOLANO 48
SONOMA 49
STANISLAUS 50
SUTTER 51
TEHAMA 52
TRINITY 53
TULARE 54
TUOLUMNE 55
VENTURA 56
YOLO 57
YUBA 58
CRESCENT CITY
MONTAGUE
Mt. Shasta
SISSON
DUNSMUIR
TRINIDAD
ARCATA
EUREKA
CARLOTTA
ALTON
SHIVELY
REDDING
ANDERSON
Black Butte
Mt. Lassen
RED BLUFF
VINA
STIRLING
ORLAND
CHICO
HAZEN
SHERWOOD
Hull Mt.
OROVILLE
MARYSVILLE
GRASS VALLEY
UKIAH
YUBA CITY
COLFAX
RUMSEY
KNIGHTS LANDING
NEW CASTLE
ROSEVILLE
CLOVERDALE
GEYERSVILLE
HEALDSBURG
CAZADERO
MARKHAM
GUERNEVILLE
DAVIS
WOODLAND
PLACERVILLE
SACRAMENTO
SANTA ROSA
ST. HELENA
OAKVILLE
ELK GROVE
NAPA
ELMIRA
GALT
TONOPAH
DUNCAN MILLS
SONOMA
SUISUN
VALLEY SPRING
BENICIA
LODI
ANGELS
TUOLUMNE
SAN RAFAEL
SAUSALITO
SAN FRANCISCO
OAKLAND
STOCKTON
LATHROP
JAMESTOWN
OAKDALE
GOLDFIELD
PLEASANTON
LIVERMORE
NILES
MODESTO
EL PORTAL
REDWOOD
PALO ALTO
MOUNTAIN VIEW
LAWS
LOS GATOS
SAN JOSE
MERCED
RAYMOND
KNOWLES
NEW ALMADEN
MORGANHILL
MINTURN
FELTON
BERENDA
SANTA CRUZ
GILROY
LOS BANOS
MADERA
APTOS
POLLASKY
WATSONVILLE
HOLLISTER
TRES PINOS
INDEPENDENCE
CITRUS
BULLFROG
GOLD CENTER
CASTROVILLE
SALINAS
FRESNO
SANGER
PACIFIC GROVE
MONTEREY
KERMAN
REEDLEY
MT. WHITNEY
SAN BENITO
SOLEDAD
MALAGA
FOWLER
SELMA
KINGSBURG
HANFORD
GOSHEN
LEMON COVE
KEELER
EXETER
DEATH VALLEY JC.
LAS VEGAS
ROSS
ARMONA
TULARE
OLANCHA
KINGS CITY
ALCALDE
STONE CANYON
PORTERVILLE
River
CHANSLOR
SAN MIGUEL
FAMOSO JC.
OIL CITY
OIL JC.
BAKERSFIELD
RANDSBURG
SAN LUIS OBISPO
OLIG
GOSFORD
LEASTALK
CRUCERO
BARNWELL
FELLOWS
MONARCH
PENTLAND
MOHAVE
KRAMER
BARSTOW
GUADALUPE
GOFFS
DEL SUR
LANCASTER
PALMDALE
DAGGETT
NEEDLES
SURF
LOMPOC
SANTA BARBARA
NORDHOFF
Mt. San Antonio
Mt. San Bernardino
Mt. San Gorgonio
CARPINTERIA
VENTURA
MONTALVO
SAUGUS
BURBANK
PASADENA
ONTARIO
GUASTI
SAN BERNARDINO
GRAFTON
COLTON
BANNING
LOS ANGELES
WHITTIER
POMONA
RIVERSIDE
COLTON LANDS JC.
INDIO
COACHELLA
MECCA
SALTON
ANAHEIM
SANTA ANA
PERRIS
ELSINORE JC.
Colorado
SAN JUAN CAPISTRANO
TEMECULA JC.
FALL BROOK JC.
IMPERIAL JC.
GLAMIS
LOS ANGELES JC.
ESCONDIDO JC.
ESCONDIDO
BRAWLEY
IMPERIAL
EL CENTRO
CALEXICO
ARAS
YUMA
FOSTER
SAN DIEGO
LA PRESA
NATIONAL CITY

FIG. 1.—Map of California, showing (by large black dots) the location of the twelve experiment vineyards of the Bureau of Plant Industry.

gravel (20 to 40 per cent) they contain. Cultivation reduces the surface to a good mulch. When grape culture in Napa Valley and the adjoining foothills became important, a reputation for the superior qualities of its dry wines was rapidly made, especially for the excellence of the white wines. This reputation has been sustained, and Napa County has remained one of the leading dry-wine sections of the State.

FRESNO EXPERIMENT VINEYARD.

The Fresno Experiment Vineyard (Pl. I, fig. 2) was established in the spring of 1903. It is located 3 miles east of Fresno on the property of the Fresno Vineyard Company, at an elevation of 290 feet above sea level. The soil is the San Joaquin sandy loam. The fact that it is an outlying isolated portion of soil of this character accounts for the increased depths to hardpan and the sandier subsoil immediately above. The San Joaquin sandy loams are confined to lands adjacent to the lower foothills on the eastern side of the San Joaquin and Sacramento Valleys, where 75,000 acres near Fresno, 6,000 acres near Stockton, and 265,000 acres about Sacramento have already been mapped. The soil is light red in color, granitic in origin, and composed largely of sharp, angular particles. The surface is rolling and generally covered with hog wallows and small mounds.

In the experiment-vineyard plat two varieties of soil were recognized, namely, adhesive sandy loam, closely approaching a true loam, and a friable sandy loam. The former retains moisture longer than the latter, which is a deeper soil of lighter texture. Leveling the plat disturbed the natural soil conditions, decreasing the depth of the sticky, adhesive sandy loam in spots and exposing free sandy loam in others, causing the hardpan underlying the plat to occur at depths varying from scarcely 20 inches to over 6 feet, whereas the average depth at which it occurs is 3½ to 4 feet below the surface. This hardpan, which always accompanies San Joaquin sandy-loam soil, is a red iron-sandstone substance cemented by hydrates of iron and alumina combined with clay. When this occurs at 2 feet or less below the surface, blasting is necessary. Trees and vines thrive when the hardpan is broken or where it lies at a sufficient depth below the surface.

The soils of the plat above the hardpan contain alkali varying from less than 0.05 to more than 20 per cent; but in the lowest grade soil no alkali is visible. Of the salts, over 90 per cent are chlorids, as follows: Calcium, 50; magnesium, 25; sodium, 15; and potassium, about 2 per cent. The remainder consists of calcium sulphate and bicarbonate of soda. The depth of the water table on the tract averages 3 feet.

Fresno is in the center of the raisin industry of the country, and is also one of the most important wine and brandy producing districts of California.

At Oakville there are being assembled and tested on resistant stocks all the grape varieties of the world thought to be of value to the Pacific slope, while at Fresno similar tests are made of raisin, currant, and fleshy varieties.

GUASTI EXPERIMENT VINEYARD.

In view of the entirely different conditions prevailing south of the Tehachapi Pass, especially in the desert region, the Department of Agriculture in the spring of 1904 established another experiment vineyard of like importance and acreage in the San Bernardino desert, at Guasti, Cal., 950 feet above sea level, on the property of the Italian Vineyard Company. (See Pl. I, fig. 3.) The soil mapped as Maricopa gravelly sand is a gray-brown gravelly sand of very uniform texture to an unknown depth. The surface is compact when untilled, because the sharp, angular sand composing the soil becomes somewhat cemented by the organic matter occurring in the topsoil. At a depth of 3 feet the soil is more concentrated and often yellowish from the oxidation of iron in the soil. The soil is almost entirely granitic, and is washed from the Sierra Madres. It contains quantities of undecomposed potash, feldspar particles, which should insure abundant potash for the maturing of grapes. The soil covers most of the San Bernardino Valley floor, and when thoroughly cultivated holds moisture well, the fine sand and silt giving the soil capillary power to bring water up from below. Two of the largest vineyards of the world are in this valley, on similar soil. As the phylloxera is not known to exist here, the plantings in the experiment vineyard are principally Vinifera varieties.

CHICO VARIETAL VINEYARD.

The Chico Varietal Vineyard is located at the plant-introduction field station, 3 miles east of Chico, Butte Co., Cal., and is about 196 feet above sea level (Pl. II, fig. 1). The soil, an alluvium, is composed of material brought down from the mountains and hills on the east and is from 8 to 12 feet deep. It is underlain by a body of sandy water-worn gravel and bowlders, which always carry water. The soil is of light texture, varying from light loam to heavy, fine sandy loam, the heaviest being loam. It is well drained and easily cultivated. The heavy, fine sandy loam consists of from 30 to 36 inches of fine sandy loam, underlain by very fine sandy loam, usually containing some gravel. The light loam has from 10 to 15 inches of fine sandy loam or sandy loam underlain by a heavier structure closely approaching loam. The largest area of this soil is found about Chico, but similar soil occurs in the Feather and the Bear River Valleys.

At the Chico vineyard are being assembled and maintained two plants each of grape varieties that prove of special value for specific purposes, together with grape immigrants from all parts of the world introduced by the Office of Foreign Seed and Plant Introduction. The first plantings were made in the spring of 1906, and the collection here already comprises 308 resistant and direct-producing sorts and 141 Vinifera varieties grafted on resistant stocks.

SMALLER VINEYARDS.

In addition to the main plantations, outlying vineyards of 10 acres each have been established to test varieties at different altitudes, at varying distances from the ocean, bays, and other bodies of water, under different climatic and other conditions, and on the leading types of vineyard soils not found at the Oakville, Fresno, and Guasti vineyards.

BRAWLEY EXPERIMENT VINEYARD.

The Brawley Experiment Vineyard was established in the spring of 1911 on the New River, 1 mile west of Brawley, Imperial Co., Cal., on the property of Mrs. Mabel Oakley, about 110 feet below sea level. (See Pl. II, fig. 2.) The soil, Imperial loam, is sediment brought down by the Colorado River and deposited in strata either while the area was still submerged or from the overflow waters as they spread over the plain. Before irrigation these strata, varying from 1.1 to 2 or 3 inches in thickness, are quite hard and look like shale, but water softens them readily. This soil after irrigation is a sticky reddish loam, a little heavier than a silt loam, having a depth of 4 to 6 feet and resting on a clay or clay-loam subsoil, which in turn is underlain by alternate strata of lighter and heavier material to an indeterminate depth. The surface is usually smooth and level and almost devoid of vegetation. The soil often contains considerable organic matter and when irrigated is productive. Alkali is found in all of it and often greatly in excess of what even the most resistant plants can stand, thus making much reclamation work necessary. This soil is by far the most extensive type in the Imperial Valley. It extends from about the middle of the eastern boundary across in a northwesterly direction into the Salton Sink. A large part of the area west and southwest of Imperial and large tracts between Mesquite Lake and the Mexican line are of this type of soil.

The Imperial Valley is said to be the earliest fruit-ripening district in the United States, and as no phylloxera have been located in it the plantings of 280 grape varieties in this vineyard are all Vinifera.

COLFAX EXPERIMENT VINEYARD.

The Colfax Experiment Vineyard was established in the spring of 1906, on the property of Mr. Louis Cortopassi, in the Sierra Nevada, 2,412 feet above sea level, 1½ miles southwest of Colfax, Placer Co., Cal. (See Pl. II, fig. 3.)

The soil, hilly, usually fairly deep, and well drained, originated in the decomposition of the Mariposa formation, consisting of dark shales or slates, sandstones or quartzite sandstones, and conglomerates. The large amount of iron present from decomposing volcanic-rock material, where exposed to perfect weathering, gives the soil a deep red color. Dark, shallow, conglomerate rocks sometimes outcrop in spots, and rock fragments occur. The first few inches are often dark red from the accumulation of organic matter. The first 8 to 18 inches are usually brownish red clay or clay loam, underlain by 3 to 6 feet of red clay or clay loam, with partially decomposed and weathered rock formations, giving the subsoil a yellow appearance.

Rock outcrops of conglomerates, chert, and slate occur in the higher portions. The native vegetation is manzanita, chaparral, live oak and yellow pine.

The Colfax district is unique in the diversity of the fruit grown on sidehill locations.

GEYSERVILLE EXPERIMENT VINEYARD.

The Geyserville Experiment Vineyard was established in the spring of 1904, on the property of John D. Bosch, just east of Geyserville, Sonoma Co., Cal., against a range of high hills (Pl. III, fig. 1), 236 feet above sea level. To a depth of 2½ to 3 feet the soil consists of a uniform dark gravelly loam with a subsoil of light or yellowish brown color, similar in texture to the topsoil. The soil is very mellow and carries considerable humus, which enables it to retain moisture well. This type of soil extends over considerable areas along the streams and the floor of the Sonoma Valley, having been washed down from the shale, schist, and conglomerate hills.

Soils of this type produce some of the choicest dry wines, both red and white, of the State.

LIVERMORE EXPERIMENT VINEYARD.

The Livermore Experiment Vineyard was established in the spring of 1904, on the property of Mr. C. H. Wente, 3 miles south of Livermore, Alameda Co., Cal., at an elevation of about 450 feet above sea level. (See Pl. III, fig. 2.) The vineyard has a very uniform, level, alluvial soil, derived from decomposed shales and schists, and is full of rounded gravel washed down from the surrounding mountains.

The surface soil is a dark-brown gravelly loam; the second, third, and fourth feet gravelly sandy loam, replaced by gravelly sand in the fifth foot. The humus decreases with the depth, while the gravel increases, varying from 30 to 59 per cent. The proportion of clay is greater than that of silt. This gives the soil a very heavy appearance, the gravel sticking together very tightly when dry or packed. No alkali exists, but ground water is encountered at 5 or 6 feet in some places. These soils are common over the Livermore Valley and produce a superior white wine of the sauterne type. This experiment vineyard was discontinued on July 1, 1914.

LODI EXPERIMENT VINEYARD.

The Lodi Experiment Vineyard was established in the spring of 1904, on the Lawrence & Murray property, about one-fourth of a mile northeast of Lodi, San Joaquin Co., Cal., about 55 feet above sea level. (See Pl. III, fig. 3.) A large body of this soil exists between Lodi and Acampo.

There are two variations on the plat. Phase No. 1 is a brown, free, sandy loam, underlain below 4½ feet by a more adhesive light-brown or yellowish sandy loam. Occasional iron concretions give the subsoil a mottled color. The soil has good capillarity and the water table occurs at 5 to 6 feet. Phase No. 2, an adhesive sand, was formed by an old stream channel. This is light-brown sand to a depth of 3 feet, the subsoil water-washed sand, much looser in texture and lighter in color, and dry to a depth of more than 6 feet, as the soil texture is too loose to exert much capillary force. There is no hardpan or alkali. The soils are, however, deficient in lime; otherwise, they are very productive, comparatively level, unirrigated, and easily tilled. This locality is well known for its table grapes and as a table-grape shipping point.

MOUNTAIN VIEW EXPERIMENT VINEYARD.

The Mountain View Experiment Vineyard was established in the spring of 1904, on the property of Mrs. Caroline Distel, 2 miles west of Mountain View, on the west side of the Santa Clara Valley, 76 feet above sea level. (See Pl. IV, fig. 1.)

The soil is a gravelly Placentia sandy loam. The first 12 inches is a dark-brown, gravelly sandy loam, dark from humus; below this, to 4 feet, the subsoil becomes redder, sandier, and more gravelly until sand is encountered. It is well drained, but inclined to become too dry in summer and fall. The surface soil at times becomes quite compact, and when plowed breaks up into hard clods. When tilled at the right time it works into a very mellow condition. These soils are from washings of granitic sandy shales and schist rocks. Before the destruction of vineyards by phylloxera and other agencies the Santa Clara Valley was the banner dry-wine producing section of California. The following areas of Placentia sandy loam have been surveyed in California: San Jose, 61,500; lower Salinas, 74,000; Los Angeles, 66,000; San Bernardino, 87,000; San Gabriel, 48,800; and Santa Ana, 16,800 acres. Soils of this series occur through the coast range of mountains from San Francisco to the Mexican line, occupying undulating portions of valleys close to the hills. The Mountain View Experiment Vineyard was discontinued on July 1, 1912.

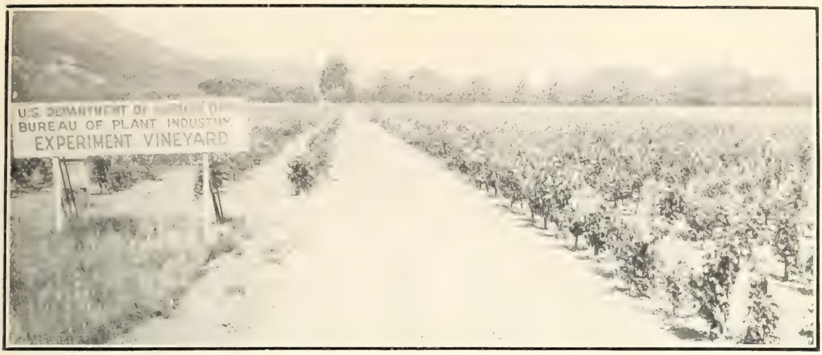
BUREAU OF PLANT INDUSTRY
EXPERIMENT VINEYARD

FIG. 1.—OAKVILLE EXPERIMENT VINEYARD.

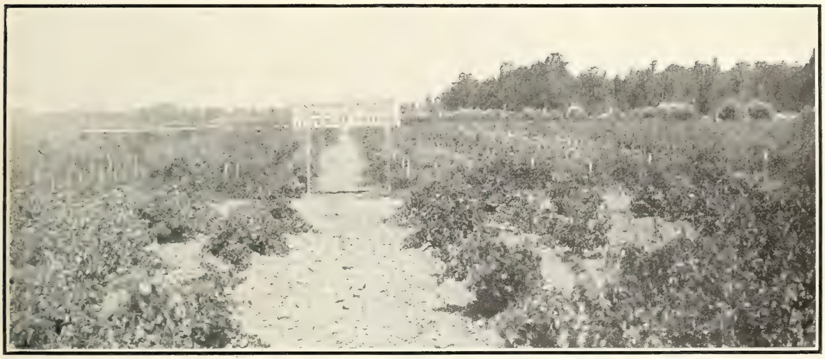

FIG. 2.—FRESNO EXPERIMENT VINEYARD.

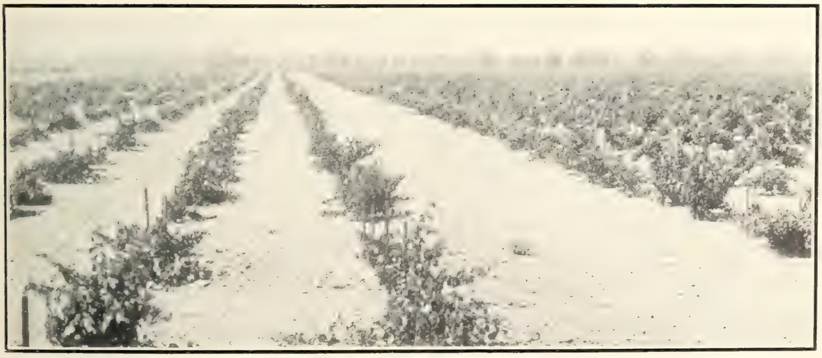

FIG. 3.—GUASTI EXPERIMENT VINEYARD.

FIG. 1.—CHICO VARIETAL VINEYARD.

FIG. 2.—BRAWLEY EXPERIMENT VINEYARD.

FIG. 3.—COLFAX EXPERIMENT VINEYARD.

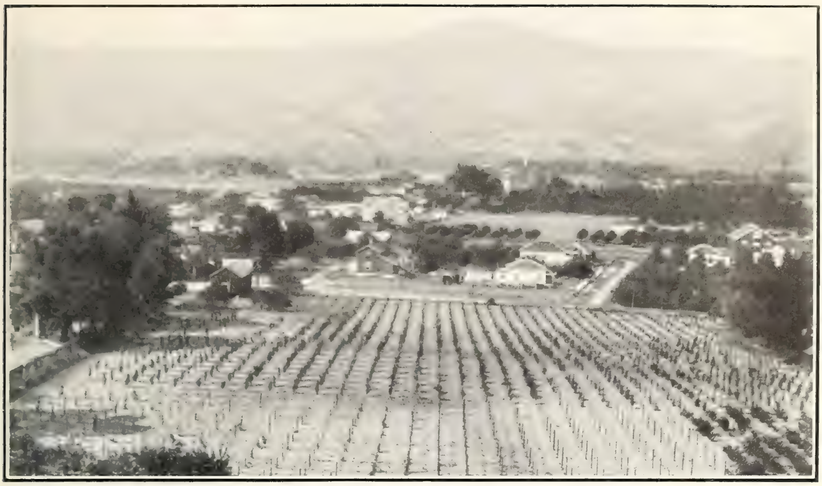

FIG. 1.—GEYSERVILLE EXPERIMENT VINEYARD.

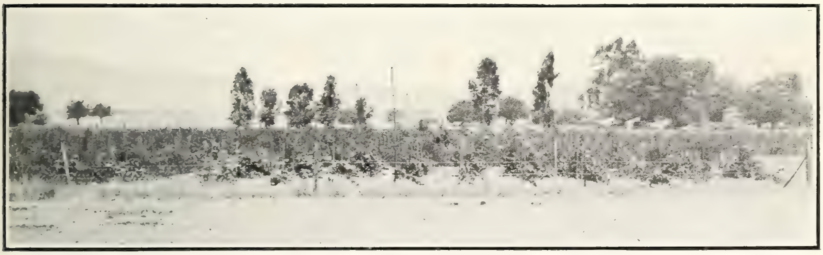

FIG. 2.—LIVERMORE EXPERIMENT VINEYARD.

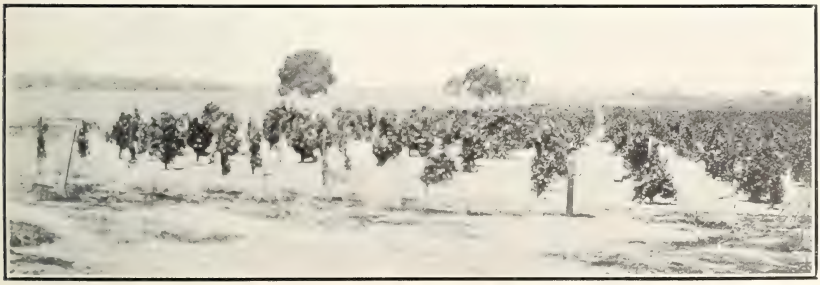

FIG. 3.—LODI EXPERIMENT VINEYARD.

FIG. 1.—MOUNTAIN VIEW EXPERIMENT VINEYARD.

FIG. 2.—SONOMA EXPERIMENT VINEYARD.

FIG. 3.—STOCKTON EXPERIMENT VINEYARD.

SONOMA EXPERIMENT VINEYARD.

The Sonoma Experiment Vineyard was established in the spring of 1904, on the property of the Gundlach-Bundschu Wine Company, about 2 miles south of Sonoma, Sonoma Co., Cal., about 110 feet above sea level. (See Pl. IV, fig. 2.) The soil is of rather poor quality, and to a depth of 8 or 10 inches is a gray loam more easily tilled than its texture indicates. The subsoil to 6 feet or more in depth is clay, changing at 4 feet, with an increase of sand, from a light-brown to a yellowish brown color. The soil is found near where weathered shales from the surrounding hills have been partially broken down and transported into the valleys, where they decompose. The soil usually occupies small, undulating ridges, or elevations, and is surrounded by the dark-brown, alluvial clay loam of the valley floor. The surface drainage is good, and no injurious quantity of alkali exists. This soil occupies extensive areas in the Sonoma Valley and in the adjacent bay regions and produces superior white wines of the Riesling, Chasselas, and Traminer types.

STOCKTON EXPERIMENT VINEYARD.

The Stockton Experiment Vineyard was established in the spring of 1907, on the property of the San Joaquin Valley Realty Company, a little over a mile southeast of Stockton, about 15 feet above sea level, on Stockton clay-loam adobe. (See Pl. IV, fig. 3.) This type, locally known as black adobe, was laid down in a swamp or tidal marsh in quiet water, the decomposing vegetation giving it a black color. It is a clay loam in texture, adhesive and sticky when wet and very hard when dry, cracking into large, cubical blocks full of small, cubical fractures. Sufficient rain slacks the clods readily. Cultivated when neither too wet nor too dry, the soil is friable and pulverizes well. The subsoil is a light-yellow silt loam, usually separated from the surface soil at a depth of 2½ feet by a thin stratum, about one-half inch thick, of rather soft marly or calcareous hardpan, which is not always continuous and is often broken or disintegrated. Roots and water readily penetrate the subsoil, often passing through the hardpan. The depth to the water table varies from 3½ to 6 feet for wet seasons and from 6 to 10 feet for dry seasons. This variation is influenced by a thin, marly hardpan which appears to hold the water down under pressure. It is somewhat difficult to establish vineyards on these soils, but when established they are very productive and lasting. Grapes for diverse purposes are grown on them. One of the largest sweet-wine establishments in the world is located near Stockton, and heavy shipments of table grapes grown on these soils are made. Soils of this type have been mapped in California as follows: Stockton, 53,312; Hanford, 5,470; and Fresno, 5,664 acres. It covers many thousand acres between the Marysville Buttes and about North Durham in the Sacramento Valley.

ACREAGE IN THE EXPERIMENT VINEYARDS IN CALIFORNIA.

The plantings and graftings in the California experiment vineyards now comprise the areas shown in Table I.

TABLE I.—*Size of the twelve experiment vineyards in California of the Bureau of Plant Industry and number of varieties planted in each.*

Vineyard.	Area.	Number of varieties.			Vineyard.	Area.	Number of varieties.		
		Resistants and direct producers.	Vinifera.				Resistants and direct producers.	Vinifera.	
			On their own roots.	On resistant stocks.				On their own roots.	On resistant stocks.
	Acres.					*Acres.*			
Brawley	2.1	......	209	......	Livermore	1.4	109	......	......
Chico	1.8	308	......	141	Lodi	3.3	112	......	80
Colfax	3.5	122	......	74	Mountain View	2	124	......	......
Fresno	9	187	......	137	Oakville	16.6	306	......	262
Geyserville	1.2	94	......	1	Sonoma	2	117	......	......
Guasti	7	83	317	......	Stockton	1.4	91	......	......

GENERAL PLAN OF PLANTINGS IN THE EXPERIMENT VINEYARDS.

All the plantings for comparative tests and study are made in regular checks of 10 vines of each variety, and all the larger plantings of resistant varieties are grafted in regular checks, usually of 10 vines each, and, where only preliminary readings are desired, the number of grafts of each variety put in have been a divisor of 10 in a check of 10 vines.

PHENOLOGICAL RECORDS.

Each vine or graft receives its block, row, and vine number. A complete history and accurate records are kept of all varieties from the time they are planted or grafted. Their behavior is closely noted, detailed descriptions are made of the vines and their respective fruits, and their value for specific uses and adaptability to different conditions are recorded. Table II summarizes the climatic observations made at the different vineyards.

TABLE II.—*Temperature and rainfall at the twelve experiment vineyards of the Bureau of Plant Industry in California.*

MAXIMUM TEMPERATURES (° F.).

Vineyard.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
Brawley[1]	80	85	95	106	118	115	115	112	111	105	93	81	118
Chico	74	78	83	94	104	111	114	116	106	96	82	74	116
Colfax	73	88	89	86	98	110	107	108	99	91	82	78	110
Fresno	73	77	84	101	110	107	115	113	108	98	84	74	115
Geyserville	79	83	91	102	108	116	116	110	113	103	98	79	116
Guasti	83	87	88	98	101	105	108	106	105	98	89	80	108
Livermore	77	79	88	95	108	108	113	107	108	99	87	75	108
Lodi	70	72	80	91	104	104	110	104	105	91	78	67	110
Mountain View	76	76	85	94	104	106	111	99	109	95	84	75	111
Oakville	77	75	86	95	106	109	110	105	110	98	84	74	110
Sonoma	77	76	82	91	104	109	106	101	111	97	82	72	111
Stockton	67	70	80	89	102	105	110	103	104	90	84	66	110

[1] Data for four years.

TABLE II.—*Temperature and rainfall at the twelve experiment vineyards of the Bureau of Plant Industry in California*—Continued.

MINIMUM TEMPERATURES (° F.).

Vineyard.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.
Brawley[1]	24	29	35	38	50	52	57	60	55	40	26	20	20
Chico	18	20	25	30	33	40	46	48	40	34	21	22	18
Colfax	14	19	24	25	30	34	44	38	34	24	18	16	14
Fresno	24	25	30	34	40	42	51	52	42	36	31	24	24
Geyserville	21	21	29	30	33	37	40	39	35	30	26	23	20
Guasti	26	26	30	32	36	39	42	42	44	39	30	26	26
Livermore	23	24	30	30	34	39	41	41	40	34	25	23	23
Lodi	22	24	30	33	38	43	45	44	40	31	25	21	21
Mountain View	25	23	29	29	34	36	40	39	37	30	27	24	23
Oakville	20	24	25	26	30	34	32	34	35	27	25	17	17
Sonoma	23	27	29	27	32	34	41	34	35	32	26	23	23
Stockton	24	24	32	36	40	40	48	42	42	36	25	20	20
MEAN TEMPERATURES (° F.).													
Brawley[1]	54.2	54.3	62.2	69.2	76.3	84.2	89.5	89.3	83.4	71.3	60.9	51.1	70.4
Chico	46.3	49.6	53.0	58.9	65.3	73.0	79.4	77.5	71.4	63.9	52.8	45.8	61.4
Colfax	42.6	44.1	46.3	52.9	59.4	68.6	75.1	73.6	65.7	59.0	51.6	43.5	56.9
Fresno	47.6	50.9	55.4	60.8	66.4	74.5	81.8	80.2	73.1	64.4	54.3	45.7	62.9
Geyserville	47.4	50.3	52.8	57.8	62.4	67.3	69.8	68.2	67.0	62.2	53.9	47.7	58.9
Guasti	49.9	51.7	54.7	58.3	60.7	67.2	75.2	73.2	69.9	64.4	56.5	51.3	60.9
Livermore	48.0	51.0	53.5	57.2	60.5	66.0	70.9	69.8	68.3	62.8	54.5	48.8	59.3
Lodi	46.5	49.4	53.1	57.6	63.0	68.8	72.9	70.6	67.0	60.0	51.5	45.0	58.8
Mountain View	49.1	51.2	53.3	56.1	59.0	62.7	66.0	65.1	64.3	60.2	54.0	48.1	57.4
Oakville	45.4	48.3	50.4	55.1	59.7	64.1	66.8	65.8	65.1	60.8	52.3	45.5	56.6
Sonoma	47.3	50.1	51.7	55.5	59.4	63.8	66.2	64.5	64.2	60.6	52.9	46.3	56.8
Stockton	45.7	48.8	52.5	56.9	62.1	68.3	73.2	71.1	67.8	61.1	51.6	44.2	58.6
PRECIPITATION (INCHES[2]).													
Brawley[3]	......	......	......	......	......	......	......	......	......	......	......	......	......
Chico	6.41	3.77	5.46	1.14	0.96	0.29	T	0.01	1.03	0.79	2.03	3.50	25.39
Colfax	13.12	7.78	11.02	3.00	2.59	.95	T	.002	1.14	2.39	4.98	6.39	53.36
Fresno	2.11	1.30	2.24	.77	.58	.03	.001	T	.30	.56	.72	1.26	9.87
Geyserville	11.08	6.85	9.49	1.40	1.30	.45	T	T	.96	1.59	3.88	5.24	42.25
Guasti	6.05	4.30	6.40	1.29	.93	.12	.02	.01	.44	.56	.87	3.14	24.13
Livermore	4.55	2.00	3.75	.65	.57	.19	T	.03	.31	.43	.90	2.47	15.86
Lodi	5.02	2.68	4.71	.80	1.56	.26	T	.003	.40	.55	1.14	2.94	20.06
Mountain View	4.47	2.46	4.45	.80	.54	.18	T	.04	.52	.51	.96	2.49	17.42
Oakville	8.07	4.42	6.57	1.10	.78	.26	T	.01	.78	.77	2.10	3.95	28.81
Sonoma	6.80	4.91	6.02	.74	.87	.25	.34	T	.82	.83	2.75	4.00	28.33
Stockton	4.24	2.12	3.62	.72	.68	.14	T	.01	.48	.42	.99	2.31	15.73

[1] Data for four years.
[2] T=Trace.
[3] No data available.

In the care and maintenance of the California experiment vineyards and in prosecuting researches in them, Mr. George C. Husmann, Pomologist in Charge of Viticultural Investigations, is assisted by Mr. Fred L. Husmann, Viticultural Superintendent, and Mr. Richard Schmidt, Assistant in Viticulture.

DESTRUCTION OF VINEYARDS.

In Bulletin 172 of the Bureau of Plant Industry the writer gives an account of the havoc wrought by the phylloxera insect to the vineyards of the Old World as well as to those of the Vinifera regions of this country. Since that bulletin was issued additional heavy losses have occurred.

The destruction in California of once flourishing vineyards covering more than 200,000 acres, through the so-called California vine disease and other agencies, but most largely through phylloxera, has already occurred. All that has been suggested to combat and eradicate the phylloxera has been tried in this and other countries, but it is conceded that, with the exception of vineyards which can be flooded cheaply and sufficiently to kill the insect, the only way successfully to reestablish Vinifera vineyards is by growing the vines on phylloxera-resistant stocks.

FACTORS IN RESISTANCE.

The resistance of vines to phylloxera depends upon two factors: (1) The inherent resistant character of the vine and (2) its adaptation to soil, climatic, and other conditions.

The inherent or natural characteristics of the plant repel or invite the attacks of the phylloxera. The number of swellings, nodosities, and tuberosities from insect punctures and the rotting of the root occasioned by them progress more or less rapidly and deeply in accordance with the texture and character of the root attacked. The weakening and ultimate death of the vine are determined by the extent of the punctures and the progress of the rot upon the roots.

The nodosities rot more or less rapidly in the different grape species. In the Vinifera they are larger and usually rot in a very short time. In the American species the nodosities are smaller and do not rot so quickly, various species differing in this respect. The number of nodosities varies greatly on the different vine varieties, and when the insects have multiplied sufficiently to cover the smaller rootlets with them, eventually the larger roots are attacked, and if cancerous patches of decomposition are found on the more developed roots tuberosities occur.

Some varieties have nodosities on practically all rootlets, while some of the American species are not injured by the phylloxera except that a few nodosities form on their roots. In fact, the resistant ratings of different species are based on a determination of the relative number and size of the nodosities found on their roots.

In order to indicate with some degree of definiteness the resistance to phylloxera (not the value of the stock), scientists have provisionally adopted an arbitrary scale of ratings. In this scale the maximum of resistance or immunity is taken as 20, while absence of resistance (or no resistance) is reckoned as zero.

The necessary degree of resistance for the production of good crops varies with the character of the soil, stocks rating above 16 being considered sufficient for all soils, 14 to 16 for fairly good soils, and 10 to 14 for rich, moist, sandy soils.

ADAPTATION TO SOIL, CLIMATIC, AND OTHER CONDITIONS.

The ability of a vine to withstand or resist the attacks of the phylloxera without serious injury is greatly influenced by the adaptability of the vine to the climatic and soil conditions under which it is grown. These may increase or diminish the vigor of the plant, retard or favor the reparation of the insect injuries, and affect the resistance of the plant by favoring or hindering the dissemination or activity of the insect. For instance, climatic conditions affect the multiplication of the insect and it can travel but little in sandy soils of a certain fineness. Then again, a variety which in one locality has splendid resistant qualities perishes in another locality having a similar soil but a different climate or in another locality having a similar climate but a different soil.

This is due to the fact that some species are adapted to moist soils, while others are variously adapted to dry soils, deep soils, or shallow soils, and also to the fact that the root systems of different species vary in habit of growth, some assuming a horizontal and others a vertical position; some roots are thick and fleshy and others small and wiry; some are soft, while others are firm. (See Pl. V.) Thus, a moisture-loving variety or one having a horizontal root system would not thrive in a dry, hot climate; neither would a variety with a deep root system thrive in a shallow, hard soil, or one adapted to a dry location thrive in a wet soil. For such reasons, a variety grown under congenial soil and climatic conditions will often prove more resistant than one of greater natural resistance grown under adverse soil and climatic conditions.

Resistance to phylloxera is also influenced by the congeniality existing between vine varieties when grafted on other vine varieties. Causes like these, and there are many others, affect the resistant qualities of vines, and it is with the study of the adaptation of varieties to varying conditions and the congeniality existing between vine varieties that the researches reported in this bulletin are particularly concerned.

The European work in the selection and breeding of resistant stocks has been determined largely by the necessity that such stocks be adapted to calcareous-soil conditions rarely encountered in the present Vinifera regions of this country. This renders it necessary for us to undertake our own researches and determinations. The varying soil, climatic, and other conditions in California make the selecting of the right grape species in the reestablishing of vineyards on resistant stocks rather a complex matter.

Of the 23 species of grapes native to North America, the 14 shown in Table III have been found sufficiently resistant to merit the attention of the viticulturist, and they are under test in the experiment vineyards of the United States Department of Agriculture.

Table III shows their natural habitat, the locations, sites, and the character of soil they prefer, the habits of the vines, their relative season of leafing (Pls. VI and VII), their root systems (Pl. V), the flowering and ripening of their fruit, the ease or difficulty of propagating them, their suitability for either bench or field grafting, and their relative resistance to phylloxera, cold, dampness, heat, and drought.

TABLE III.—*Cultural data of fourteen American species of grapes whose varieties or hybrids are under test as resistant stocks in twelve experiment vineyards in California.*[1]

Name and region of nativity.	Preferred location.	Vine.	Roots.	Season of leafing, flowering, and ripening.	Percentage of cuttings taking root.	Grafting adaptation.	Resistance to—				
							Phylloxera (out of a possible 20).	Cold.	Dampness.	Heat.	Drought.
Vitis labrusca (northern fox grape): Allegheny Mountains, from New England to South Carolina.	Wet thickets; granitic soils	Vigorous, medium-sized climber.	Large, fleshy	Very late	85	BF[1]	5	VG		F	F.
V. candicans (mustang grape): Oklahoma, Texas, and New Mexico.	Black waxy lands or adobe	Moderately vigorous, medium climber.	Vigorous, tender	Medium early	30	F	15	F	F	G	G.
V. aestivalis (summer grape): Southern New York to Florida; westward to the Mississippi and Missouri Rivers.	High, warm, gravelly, moist soils.	Vigorous, medium-sized climber.	Rather large, hard, plunging.	Medium late	50	F	14	VG		G	G.
V. linsecomii (post-oak or turkey grape): Texas	High, well drained timber lands, granitic gravelly clay, compact, deep, rich river-bank soils.	Vigorous, good-sized climber.	Medium size, hard, and long.	do	40	F	14	F		G	G.
V. monticola (sweet mountain grape): Texas	Low limestone hills; does moderately well in sandy soils.	Rather small; good grower.	Bushy, plunging	do	65	FB	18	F		G	G.
V. berlandieri (little mountain grape): Texas and Mexico	Tops, sides, and bottoms of limestone hills.	Slender; medium grower.	Strong and plunging	Late	40	F	19	F		G	G.
V. cordifolia (frost or sour winter grape): Great Lakes to Florida, abundant in Illinois, Tennessee, Missouri, and Arkansas.	Deep, rich, loose soils on river banks.	Vigorous, strong climber.	Strong, hard, carneous.	do	25	F	18	VG	F	G	G.
V. cinerea (sweet winter or ashy grape): Illinois to Texas	do	Vigorous, strong grower.	Large, fleshy, plunging	Very late	25	F	15	F	G		
V. champini (adobe-land grape): Texas	Limestone hills; adapts itself to a variety of soils.	Vigorous, spreading grower.	Large, ramified, plunging.	Early to medium	80	FB	12	F	G	G	G.

V. doaniana (Texas Panhandle large grape): Texas	Sandy, limy soils	Slender, fair grower	Numerous, thick, deeply penetrating.	Early	60	F	12	F	G	G
V. longii (Solonis, bush or gulch grape): Texas Panhandle, New Mexico, Kansas, and Colorado.	Ravines along streams. Cretaceous, generally rich, sandy, moist, always fresh soils.	Bushy, upright, vigorous grower.	Large, ramified, horizontal, hard.	do	60	F	14	F	G	G	G.
V. rupestris (sand, sugar, or rock grape): From the Rio Grande in Texas northeasterly into Oklahoma, northwestern Arkansas, southern Missouri, Kentucky, and Tennessee; Cumberland Mountains north to Pennsylvania.	Open places in poor soils and along gravelly banks and ravines.	Vigorous, short, bushy grower.	Long, slender, or strong, plunging.	Very early	80	B	19	G		G	G.
V. vulpina (riparia or riverside grape): From Salt Lake east and from Texas north in all the States as far as 90 miles north of Quebec.	Moist, loose, sandy soils along creeks and river bottoms.	Vigorous; medium size.	Long, thin, slender, hard, wiry, ramified.	do	85	FB	19	VG	G		
V. bicolor (blue grape): Northern Missouri, Illinois, Wisconsin, Indiana, Michigan, Ohio, Kentucky, Pennsylvania, New York, New Jersey, Maryland, and Ontario.	Black sandy and red siliceous soils.	Fair grower	Rather hard, large, plunging.	Late	40	F	16	VG		G	G.

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[1] Abbreviations used in table: Under grafting, B for bench, F for field; under resistance, F for fair, G for good, and V for very.

HYBRIDS.

In the attempts to secure resistants suited to soil, climatic, and other conditions which at the same time would prove congenial, lasting, and productive stocks on which to graft the Vinifera varieties, many difficulties were encountered. For instance, the stock may be adapted to the soil, but it may be so hard to root as to make its commercial use impracticable. Again, the stock may be suited to the soil and it may root easily and be resistant, but not congenial to or make a lasting junction with Vinifera varieties; or the congeniality of the variety may be good, but the fruitfulness of the graft may be impaired.

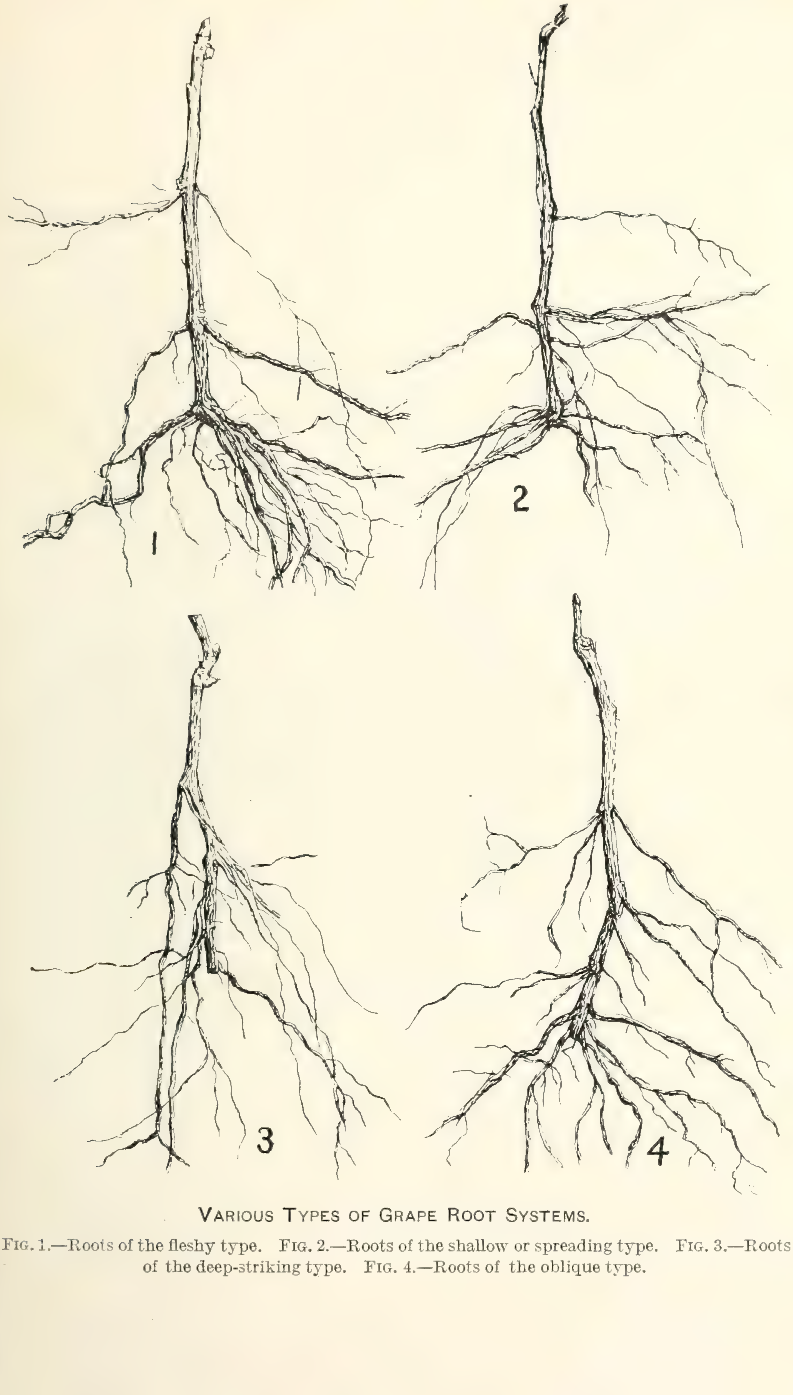
In many cases also no resistant species are exactly suited to the soil and climatic conditions. To overcome such difficulties and others of like nature, hybrids have been and are being produced, in the breeding of which such of the native American species were selected as possess the various qualities desired. (See Pls. VIII and IX.) In this work some remarkable successes have been achieved, such, for instance, as Riparia × Rupestris, No. 101; Riparia × Rupestris, No. 3306; Riparia × Rupestris, No. 3309; Solonis × Othello, No. 1616; Rupestris × Cordifolia, Nos. 107–11; Riparia × (Cordifolia × Rupestris), Nos. 106–8; Rupestris × Berlandieri, No. 301A; Berlandieri × Riparia, No. 420A; and Monticola × Riparia, No. 18808.

Efforts have also been made to produce hybrids between the Vinifera and American native-grape varieties which would be resistant to phylloxera and at the same time give satisfactory crops of fruit of desirable character and quality. (See Pl. X, fig. 2.) By having such direct producers, the cost of grafting would not only be avoided, but congeniality would not have to be reckoned with. Some remarkable strides are being made along this line. A number of these hybrids are under test in the experiment vineyards, but so far it is not possible to say that any of them are better than or equal to some of our finer varieties of native American grapes or that they have as good phylloxera-resistant qualities.

GROWTH RATINGS OF RESISTANT VINES AND DIRECT PRODUCERS.

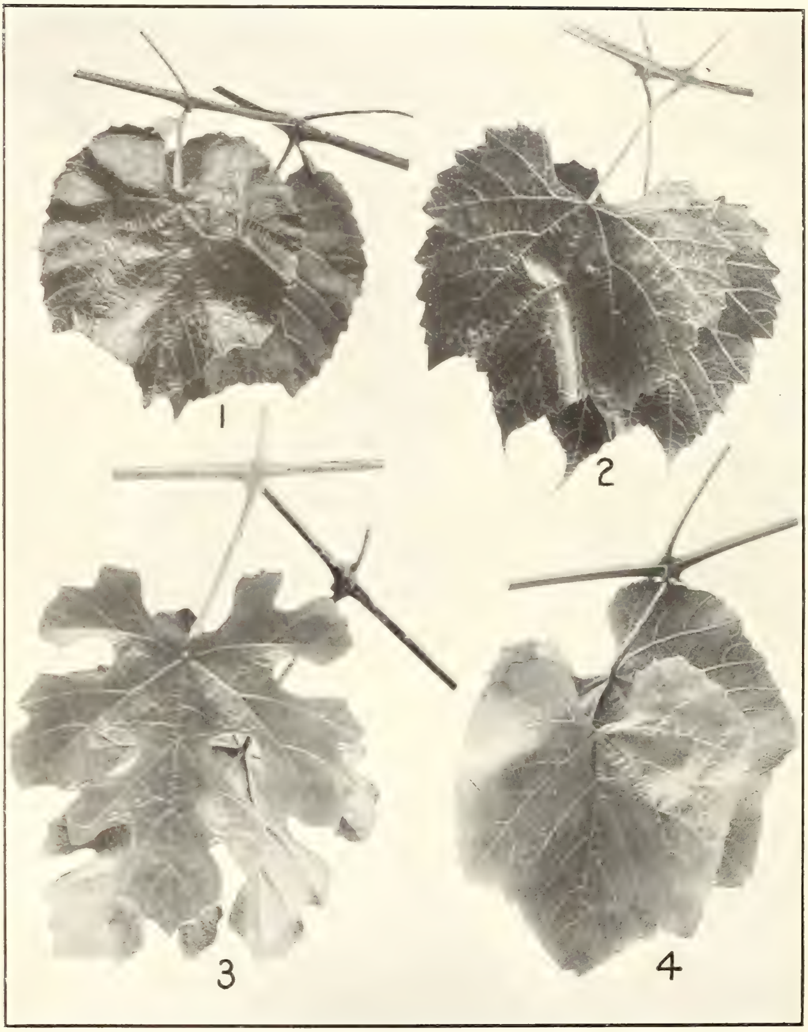
In Table IV the upper numbers after each name in the columns headed "Experiment vineyard" show the years when the vines were planted; the lower numbers show the growth ratings, which in all cases were made in the autumn of 1913.

The growth or adaptability of each variety at each vineyard where it is under test is expressed in the form of a percentage rating on a scale in which the growth of the variety under conditions for which it is well adapted is taken as the standard of excellence, 100 per cent.



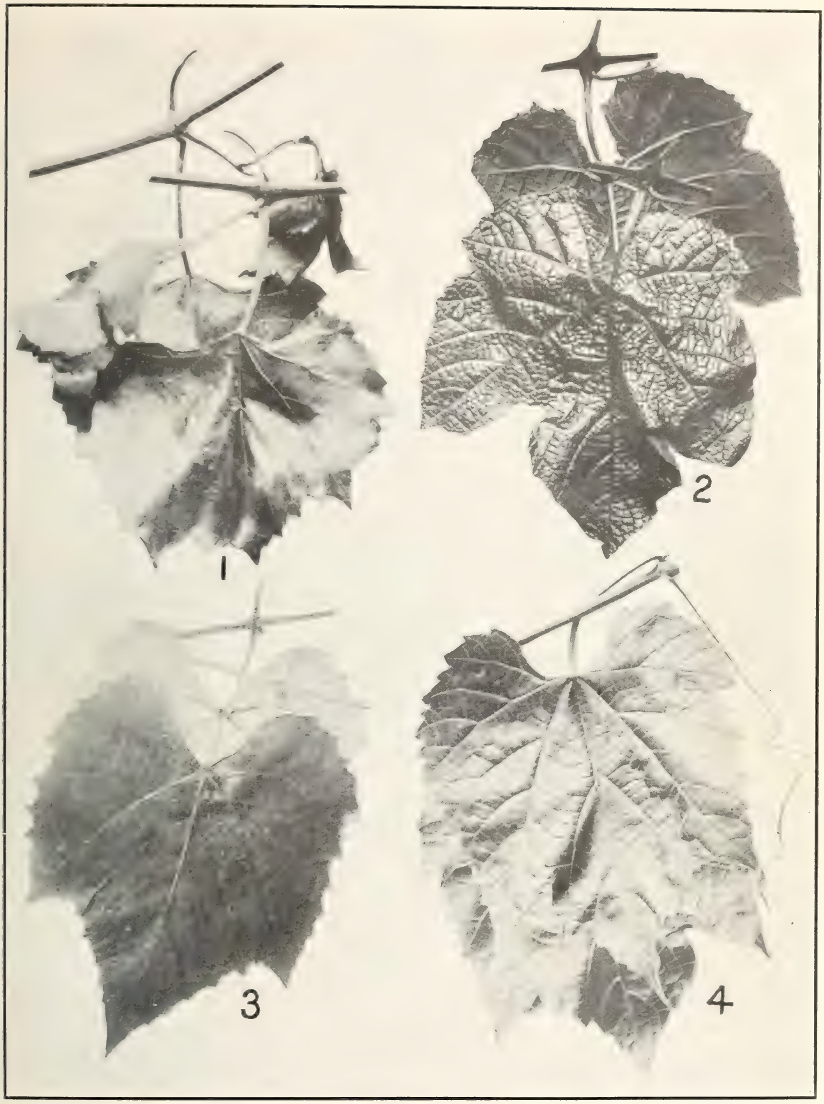
VARIOUS TYPES OF GRAPE ROOT SYSTEMS.

FIG. 1.—Roots of the fleshy type. FIG. 2.—Roots of the shallow or spreading type. FIG. 3.—Roots of the deep-striking type. FIG. 4.—Roots of the oblique type.



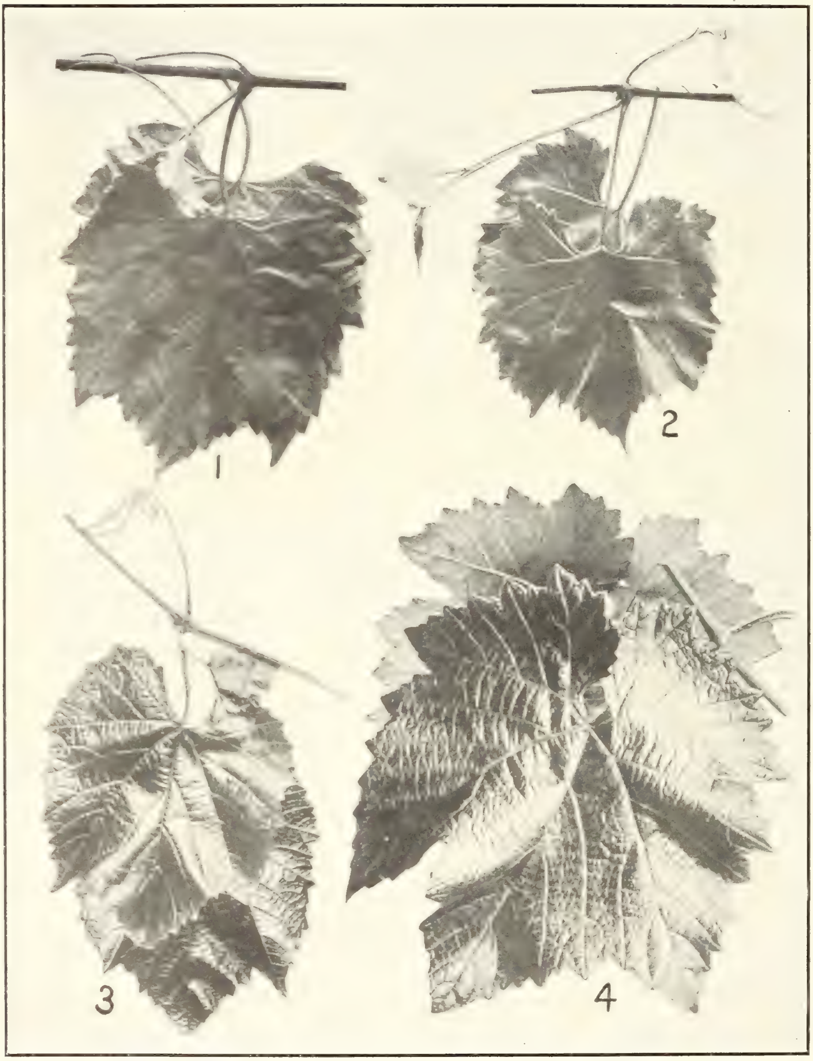
LEAVES OF FOUR NATIVE AMERICAN SPECIES OF GRAPES USED AS STOCKS ON WHICH TO GRAFT VINIFERA VARIETIES.

FIG. 1.—*Vitis champini*, upper and lower side of leaf, one-fourth natural size. FIG. 2.—*Vitis doaniania*, upper and lower side of leaf, one-sixth natural size. FIG. 3.—*Vitis candicans*, upper and lower side of leaf, one-fourth natural size. FIG. 4.—*Vitis berlandieri*, upper and lower side of leaf, one-sixth natural size.



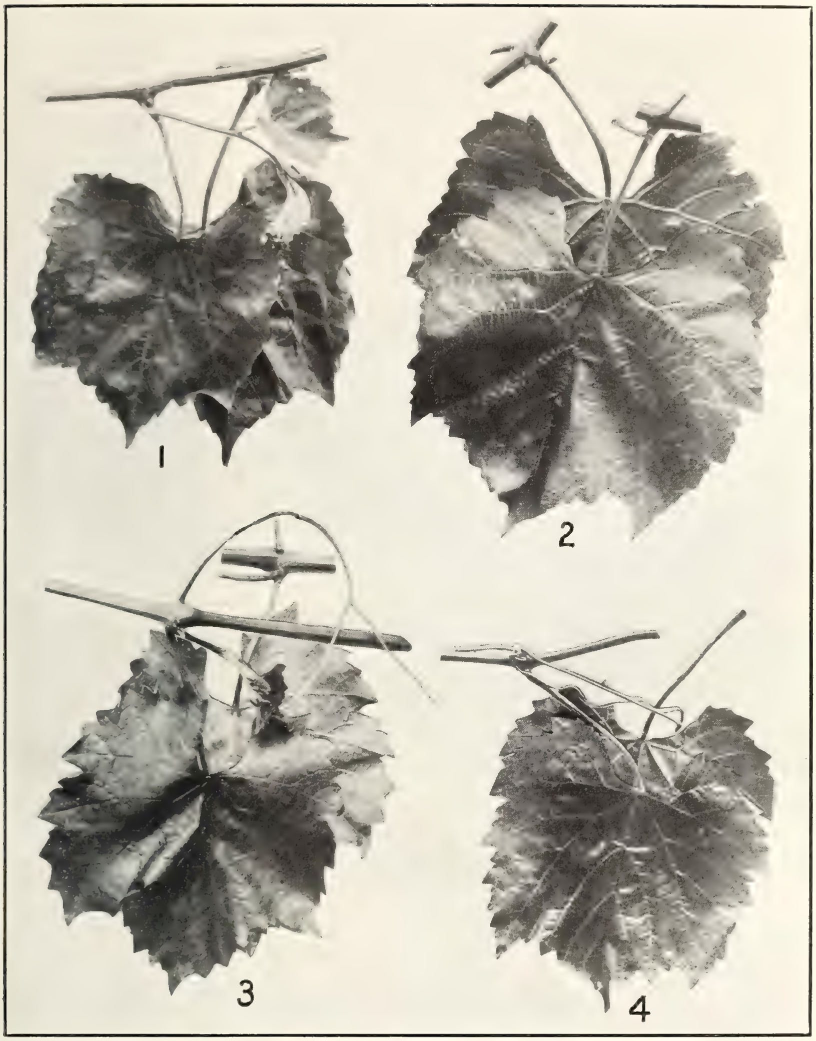
LEAVES OF FOUR NATIVE AMERICAN SPECIES OF GRAPES EXTENSIVELY USED AS STOCKS ON WHICH TO GRAFT VINIFERA VARIETIES.

FIG. 1.—*Vitis rupestris,* upper and lower side of leaf, one-fourth natural size. FIG. 2.—*Vitis aestivalis,* upper and lower side of leaf, one-fourth natural size. FIG. 3.—*Vitis labrusca,* upper and lower side of leaf, one-seventh natural size. FIG. 4.—*Vitis riparia,* upper and lower side of leaf, two-fifths natural size.



LEAVES OF FOUR GRAPE HYBRIDS USED AS STOCKS ON WHICH TO GRAFT VINIFERA VARIETIES.

FIG. 1.—Monticola × Riparia No. 18808, upper and lower side of leaf, one-sixth natural size. FIG. 2.—Cordifolia × Riparia No. 125-1, upper and lower side of leaf, one-eighth natural size. FIG. 3.—Berlandieri × Riparia No. 420A, upper and lower side of leaf, one-sixth natural size. FIG. 4.—Linsecomii × (Labrusca × Vinifera), upper and lower side of leaf, one-eleventh natural size.



LEAVES OF FOUR GRAPE HYBRIDS ORIGINATED IN FRANCE AND EXTENSIVELY USED AS STOCKS ON WHICH TO GRAFT VINIFERA VARIETIES.

FIG. 1.—Riparia × Rupestris No. 3306, upper and lower side of leaf, one-eighth natural size. FIG. 2.—Mourvedre × Rupestris No. 1202, upper and lower side of leaf, five-sixteenths natural size. FIG. 3.—Riparia × Rupestris No. 101, upper and lower side of leaf, five-fourteenths natural size. FIG. 4.—Riparia × Rupestris No. 3309, upper and lower side of leaf, one-third natural size.

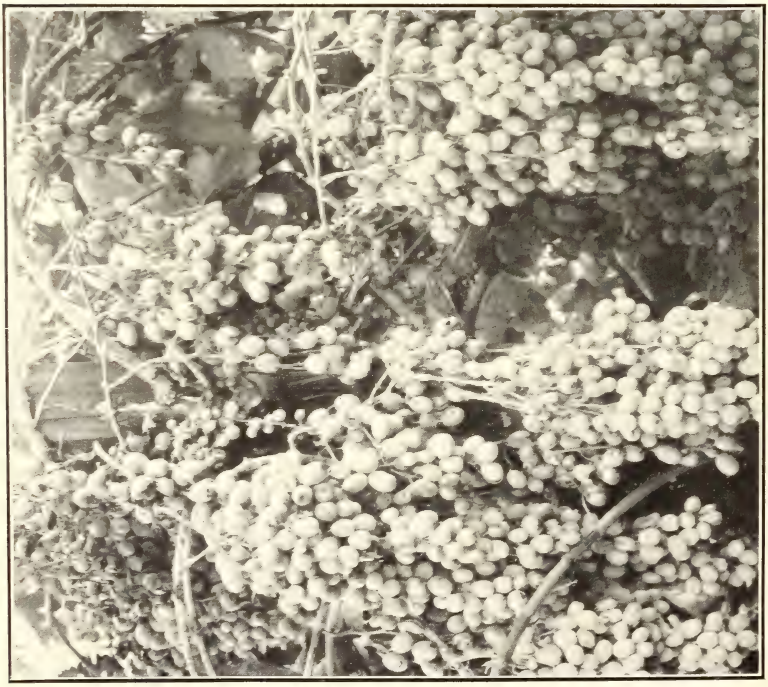


FIG. 1.—A VINIFERA ON RESISTANT STOCK (HUNISA GRAFTED ON DOG RIDGE).

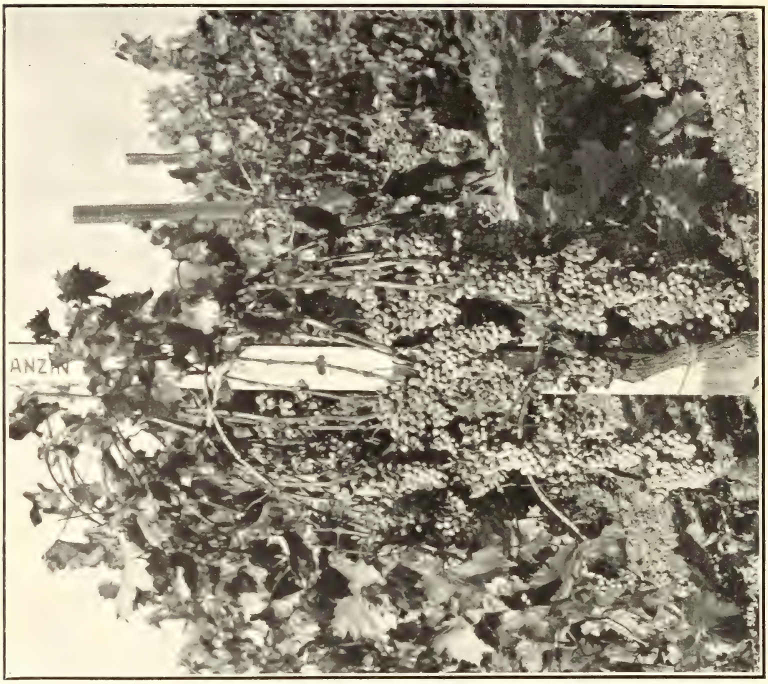


FIG. 2.—A DIRECT PRODUCER ON ITS OWN ROOTS (ALICANTE GANZIN).

These adaptability ratings therefore represent the behavior of each variety under the conditions existing at the several vineyards expressed in terms that permit comparison with its behavior elsewhere. They are not based on a comparison with other varieties in the same vineyard. Each variety is therefore rated on a scale based on its own standard of excellence rather than on any arbitrary scale formulated for application to all varieties. It is believed that this method renders possible a truer expression of the reaction of each variety to different soil and climatic conditions than would be possible by using any arbitrary scale of measurement of growth.

To illustrate, Aramon × Rupestris Ganzin, No. 2, planted at each of three experiment vineyards in 1904, at Fresno was rated 97; at Livermore, 83; and at Lodi, only 46. This shows that at Fresno the growth was very satisfactory, and it was therefore rated at 97. At Livermore the growth was good, but not nearly so good as at Fresno; it was therefore rated at 83. At Lodi it made a very poor growth, which as compared with the growth made at Fresno was as 46 to 97, or when compared to perfect growth as 46 to 100, i. e., 46 per cent.

TABLE IV.—*Resistant and direct-producing varieties of grapes in eleven experiment vineyards in California, showing the year of planting in each vineyard and the relative growth rating.*

Variety.	Experiment vineyard.										
	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Adobe Giant:											
Year of planting	1906	1906	1903	1904	......	......	......	......	1903	1907	1907
Growth rating	89	93	85	85	......	......	......	......	90	90	87
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554-5):											
Year of planting	1906	1906	1904	1904	......	......	1904	......	1904	1904	1908
Growth rating	96	87	93	92	......	......	92	......	95	89	89
(Aestivalis × Rupestris) × Riparia, No. 227:											
Year of planting	1906	......	......	......	......	......	......	1905	1905	1905	......
Growth rating	82	......	......	......	......	......	......	81	95	89	......
Aramon × Rupestris Ganzin, No. 1:											
Year of planting	1907	1906	1913	1904	......	1904	1904	1904	1904	1904	1908
Growth rating	99	94	......	98	......	96	98	93	98	90	85
Aramon × Rupestris Ganzin, No. 2:											
Year of planting	1907	1906	1904	1904	1907	1904	1904	1904	1904	1904	1908
Growth rating	93	93	97	97	87	83	46	93	98	92	83
Aramon × Rupestris Ganzin, No. 9:											
Year of planting	1906	......	1904	1904	......	1904	1905	1904	1904	1904	1907
Growth rating	98	......	95	71	......	88	94	67	78	94	95
Aramon × Riparia, No. 143A:											
Year of planting	......	......	1904	......	......	......	......	......	1904	......	1907
Growth rating	......	......	96	......	......	......	......	......	87	......	95
Arizonica Phoenix:											
Year of planting	1912	......	......	......	1905	......	......	......	......	......	......
Growth rating	20	......	......	......	94	......	......	......	......	......	......
Australis:											
Year of planting	1906	1906	1903	1904	......	1904	1904	1907	1903	1904	1908
Growth rating	91	90	97	92	......	89	90	60	89	92	89
Barnes:											
Year of planting	1906	1906	1903	......	1907	1907	......	1907	1903	......	1907
Growth rating	93	88	94	......	95	87	......	51	99	......	91
Berlandieri, No. 1:											
Year of planting	1906	1906	1904	1904	......	1904	1904	1904	1904	1904	......
Growth rating	88	81	88	85	......	60	72	78	83	84	......

TABLE IV.—*Resistant and direct-producing varieties of grapes in eleven experiment vineyards in California, showing the year of planting in each vineyard and the relative growth rating*—Continued.

Variety.	Experiment vineyard.										
	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Berlandieri, No. 2:											
Year of planting	1906	1906	1904	1906	......	......	......	......	1909	......	......
Growth rating	89	79	65	76	......	......	......	......	85	......	......
Berlandieri Lafont, No. 9:											
Year of planting	1906	......	1904	1904	......	1905	1905	1904	1904	1904	......
Growth rating	88	......	71	93	......	83	66	72	86	77	......
Berlandieri × Riparia, No. 33 E. M.:											
Year of planting	1907	1906	1904	......	......	......	1904	1904	1904	......	1907
Growth rating	92	83	77	......	......	......	68	70	93	......	74
Berlandieri × Riparia, No. 34 E. M.:											
Year of planting	1906	1906	1903	1904	......	1907	......	1904	1903	1907	1907
Growth rating	90	90	87	91	......	85	......	66	93	87	86
Berlandieri × Riparia, No. 157-11:											
Year of planting	1907	1906	1904	1904	......	......	1904	1904	1904	......	1907
Growth rating	99	86	81	89	......	......	76	75	92	......	82
Berlandieri × Riparia, No. 420A:											
Year of planting	1907	1907	1903	1904	1905	1910	1904	1904	1903	1905	1907
Growth rating	97	95	93	75	91	33	93	88	98	92	87
Berlandieri × Riparia, No. 420B:											
Year of planting	1912	1907	1904	......	......	1907	1907	1904	1904	......	......
Growth rating	10	90	85	......	......	85	87	64	88	......	......
(Bourisquou × Rupestris, No. 601) × Calcicola, No. 13205:											
Year of planting	1906	......	1913	1907	......	1905	......	1907	1905	......	......
Growth rating	95	......	91	93	......	91	......	......	94	......	......
Cabernet × Berlandieri, No. 333:											
Year of planting	......	......	1903	1904	......	1904	......	1904	1903	......	1907
Growth rating	......	......	86	91	......	77	......	91	94	......	84
Cabernet × Rupestris Ganzin, No. 33A:											
Year of planting	1909	......	1904	1904	1907	1904	1904	1904	1904	1905	......
Growth rating	85	......	94	93	85	87	82	83	92	72	......
Chasselas × Berlandieri, No. 41B:											
Year of planting	1906	......	1904	1904	......	......	......	1904	1906	1907	1907
Growth rating	99	......	81	94	......	......	......	69	87	84	91
(Cinerea × Rupestris) × Riparia, No. 229:											
Year of planting	1906	......	1905	......	......	......	......	......	1905	......	1908
Growth rating	88	......	87	......	......	......	......	......	90	......	82
Columbaud × Riparia, No. 2502:											
Year of planting	1906	......	1904	......	......	1907	1907	1907	1904	1907	1907
Growth rating	99	......	89	......	......	74	86	80	89	89	92
Columbaud × Rupestris:											
Year of planting	......	......	......	......	......	1907	......	......	1903	1907	......
Growth rating	......	......	......	......	......	94	......	......	96	90	......
Constantia:											
Year of planting	1907	1907	1905	......	1905	......	......	......	1904	......	1907
Growth rating	79	94	96	......	98	......	......	......	99	......	96
Cordifolia × Riparia, No. 125-1:											
Year of planting	1906	......	1904	......	......	1906	1906	......	1904	1907	......
Growth rating	90	......	98	......	......	81	84	......	95	84	......
Cordifolia × Rupestris:											
Year of planting	1906	......	1905	......	......	1905	......	1905	......	......	......
Growth rating	89	......	77	......	......	88	......	60	......	......	......
Dog Ridge:											
Year of planting	1906	1906	1903	1904	1905	1904	1904	1904	1903	1904	1907
Growth rating	97	96	89	97	97	94	94	98	97	97	85
Hotporup:											
Year of planting	1907	......	1903	1904	......	1904	1904	1904	1903	1904	......
Growth rating	97	......	83	89	......	84	93	74	90	92	......
Judge:											
Year of planting	1906	1906	1903	1907	1907	1906	1907	1907	1903	1907	......
Growth rating	85	85	93	77	84	66	83	80	90	86	......
Lenoir:											
Year of planting	1906	1906	1904	1904	1905	1904	1904	1904	1903	1904	1907
Growth rating	100	93	77	95	97	86	96	94	98	95	90
Monticola × Riparia, No. 554:											
Year of planting	1912	......	1904	1904	......	1904	1904	1904	1904	1904	1907
Growth rating	40	......	88	82	......	84	87	80	98	87	88

Table IV.—*Resistant and direct-producing varieties of grapes in eleven experiment vineyards in California, showing the year of planting in each vineyard and the relative growth rating*—Continued.

Variety.	Experiment vineyard.										
	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Monticola × Riparia, No. 18804:											
Year of planting	1906	1906	1904	......	......	1905	1904	1904	1904	1904	1907
Growth rating	95	84	94	......	......	90	91	81	89	91	85
Monticola × Riparia, No. 18808:											
Year of planting	1907	1906	1904	......	......	1905	1904	1904	1904	1904	1907
Growth rating	97	90	94	......	......	90	88	86	91	93	93
Monticola × Riparia, No. 18815:											
Year of planting	1906	1906	1904	......	......	1904	1905	1904	1904	1904	1908
Growth rating	96	92	95	......	......	95	90	86	93	95	92
Motley:											
Year of planting	1906	1906	......	1904	......	1906	1906	1904	1903	1906	......
Growth rating	90	92	......	81	......	76	96	90	86	88	......
Mourvedre × Rupestris, No. 1202:											
Year of planting	1906	1906	1903	1904	1905	1904	1904	1904	1903	1904	1907
Growth rating	93	97	100	99	94	98	97	95	100	92	95
Mourvedre × Rupestris, No. 1203:											
Year of planting	1906	1907	1904	1906	......	1906	1906	......	1906	1906	......
Growth rating	99	91	98	88	......	81	91	......	98	80	......
No name, No. 1:											
Year of planting	......	......	......	......	......	......	......	......	1905	......	......
Growth rating	......	......	......	......	......	......	......	......	95	......	......
No name, No. 2:											
Year of planting	......	......	......	......	......	......	......	......	1905	......	......
Growth rating	......	......	......	......	......	......	......	......	95	......	......
No name, No. 3:											
Year of planting	......	......	......	......	......	......	......	......	1905	......	......
Growth rating	......	......	......	......	......	......	......	......	94	......	......
Pinot Bouschet × Riparia, No. 3001:											
Year of planting	1907	......	1904	......	......	......	......	......	1904	1907	1907
Growth rating	91	......	96	......	......	......	......	......	90	82	83
Pinot × Rupestris, No. 1305:											
Year of planting	1907	1907	1909	1904	1907	1904	1904	1904	1904	1904	1907
Growth rating	99	93	99	93	89	96	93	94	98	95	94
Ramsey:											
Year of planting	1906	1907	1903	......	1907	1910	1907	1906	1903	......	......
Growth rating	90	89	94	......	88	85	92	94	98	......	......
Riparia du Colorado:											
Year of planting	1906	......	1903	1904	1907	1905	1904	1904	1903	1904	......
Growth rating	82	......	72	83	82	51	91	66	66	71	......
Riparia France:											
Year of planting	1906	......	1904	......	1907	1904	1904	......	......	1904	1907
Growth rating	51	......	97	......	84	74	79	......	......	86	87
Riparia Gloire:											
Year of planting	1906	1906	1903	......	1905	1904	1907	......	1903	1904	1907
Growth rating	87	86	85	......	93	82	77	......	88	85	75
Riparia Grand Glabre:											
Year of planting	1909	......	1904	......	1905	1904	1904	1904	1903	1904	1907
Growth rating	56	......	92	......	85	82	82	74	86	89	83
Riparia Martineau:											
Year of planting	1906	......	......	......	......	......	......	......	1904	......	......
Growth rating	92	......	......	......	......	......	......	......	86	......	......
Riparia Ramond:											
Year of planting	1912	......	......	......	1905	......	......	......	1906	......	......
Growth rating	60	......	......	......	92	......	......	......	86	......	......
Riparia Selected:											
Year of planting	......	......	......	......	......	......	......	......	1905	......	......
Growth rating	......	......	......	......	......	......	......	......	89	......	......
Riparia × Berlandieri, No. 161–49:											
Year of planting	1906	1907	......	......	......	......	......	1907	1904	......	......
Growth rating	95	91	......	......	......	......	......	87	90	......	......
Riparia × (Cordifolia × Rupestris), No. 106–8:											
Year of planting	1906	1906	1910	1904	......	1904	1904	1904	1910	1904	1907
Growth rating	88	86	93	86	......	76	85	72	92	90	91
Riparia Grand Glabre × Aramon Rupestris, No. 4110:											
Year of planting	1906	......	1904	......	......	1904	1904	......	1904	1904	......
Growth rating	73	......	89	......	......	92	91	......	91	91	......
Riparia × Rupestris, No. 101:											
Year of planting	1906	1906	1904	1904	......	1904	1904	1904	1904	1904	1907
Growth rating	85	81	95	96	......	91	97	65	93	89	91

TABLE IV.—*Resistant and direct-producing varieties of grapes in eleven experiment vineyards in California, showing the year of planting in each vineyard and the relative growth rating*—Continued.

Variety.	Experiment vineyard.										
	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Riparia × Rupestris, No. 101-14:											
Year of planting	1906	1906	1904	1904	1905	1904	1904	1904	1904	1904	1907
Growth rating	92	92	93	90	72	90	98	86	94	90	94
Riparia × Rupestris, No. 3306:											
Year of planting	1906	1906	1904	1904	1907	1904	1904	1904	1904	1904	1907
Growth rating	94	92	74	96	89	77	80	91	93	93	90
Riparia × Rupestris, No. 3309:											
Year of planting	1906	1906	1904	1904	1907	1904	1904	1904	1903	1904	1907
Growth rating	89	95	95	97	88	79	94	88	92	91	70
Riparia × Rupestris, No. 108-103:											
Year of planting	......	1906	......	1906	......	......	......	......	1905	1906	1907
Growth rating	......	90	......	91	......	......	......	......	93	91	82
Riparia × Rupestris de Jaeger:											
Year of planting	1909	1906	1904	......	1907	......	1907	......	1904	1904	......
Growth rating	67	91	94	......	86	......	70	......	91	87	......
Riparia × (Rupestris × Aramon) Jaeger, No. 201:											
Year of planting	1906	1906	1904	1904	1907	1904	1904	1904	1904	1904	1907
Growth rating	99	94	85	95	82	95	93	67	96	89	95
Riparia × Rupestris Ramond:											
Year of planting	1906	......	......	......	......	......	......	......	1904	......	......
Growth rating	87	......	......	......	......	......	......	......	77	......	......
Rupestris des Caussettes:											
Year of planting	1906	1906	1903	1904	1905	1904	1904	1904	1903	1904	1907
Growth rating	95	94	91	90	92	85	90	78	91	89	90
Rupestris des Semis, No. 81-2:											
Year of planting	1907	1906	1904	......	......	1907	......	1907	1904	......	1907
Growth rating	100	90	96	......	......	96	......	81	96	......	88
Rupestris Ganzin:											
Year of planting	1906	......	......	......	......	......	......	......	1906	......	......
Growth rating	86	......	......	......	......	......	......	......	93	......	......
Rupestris le Reux:											
Year of planting	1906	......	......	......	1905	......	......	......	1906	......	......
Growth rating	93	......	......	......	89	......	......	......	91	......	......
Rupestris Martin:											
Year of planting	1906	1907	1903	1904	1905	1904	1904	1903	1903	1904	1907
Growth rating	92	83	77	95	79	92	92	75	92	90	89
Rupestris Metallica:											
Year of planting	1906	1906	1903	1904	1905	1904	1904	1904	1903	1906	......
Growth rating	99	92	90	95	95	93	93	82	97	89	......
Rupestris Mission:											
Year of planting	1906	1906	1904	1904	......	1904	1904	1904	1903	1904	1907
Growth rating	91	86	79	85	......	88	87	74	85	81	81
Rupestris Othello:											
Year of planting	1906	......	1904	......	......	1907	......	......	1904	......	1907
Growth rating	98	......	87	......	......	65	......	......	92	......	81
Rupestris Pillans:											
Year of planting	1906	1906	1905	1906	1905	1905	1905	1905	1905	1905	1907
Growth rating	99	92	96	83	95	92	93	80	87	82	87
Rupestris St. George:											
Year of planting	1906	1906	1903	1904	1905	1904	1904	1904	1903	1904	1907
Growth rating	94	99	96	97	95	98	98	87	100	87	97
Rupestris × Berlandieri, No. 219A:											
Year of planting	1907	1906	1902	1904	1905	1904	1904	1904	1903	1904	1907
Growth rating	75	90	82	85	85	88	91	73	83	86	90
Rupestris × Berlandieri, No. 301A:											
Year of planting	1907	1906	1903	1904	......	1904	......	1907	1903	1904	1907
Growth rating	100	83	85	92	......	85	......	88	92	86	84
Rupestris × Berlandieri, No. 301B:											
Year of planting	1906	1907	......	1904	......	......	1905	1905	......	......	......
Growth rating	92	94	......	94	......	......	97	87	......	......	......
Rupestris × Berlandieri, No. 301-37-152:											
Year of planting	1906	1907	1904	......	......	1906	......	1907	1904	......	......
Growth rating	91	89	90	......	......	84	......	82	88	......	......
Rupestris × Chasselas Rose, No. 4401:											
Year of planting	1906	1906	......	......	......	......	......	......	1907	......	......
Growth rating	91	96	......	......	......	......	......	......	98	......	......
Rupestris × Cinerea:											
Year of planting	1909	1907	1904	......	......	......	......	1907	1904	......	1907
Growth rating	60	89	90	......	......	......	......	85	92	......	92

TABLE IV. —*Resistant and direct-producing varieties of grapes in eleven experiment vineyards in California, showing the year of planting in each vineyard and the relative growth rating*—Continued.

Variety.	Experiment vineyard.										
	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Rupestris × Cordifolia, No. 107–11:											
Year of planting	1906	1907	1904	......	......	1905	1904	1905	1905	1905	......
Growth rating	71	89	89	......	......	84	94	71	89	85	......
Rupestris × (Cordifolia × Rupestris), No. 202:											
Year of planting	1907	1907	1904	......	......	......	......	1907	1904	1904	1907
Growth rating	68	91	90	......	......	......	......	82	85	87	77
Rupestris × (Cordifolia × Rupestris), No. 202-5:											
Year of planting	1906	......	1904	1906	......	1906	1907	......	......	1906	......
Growth rating	90	......	90	89	......	50	78	......	......	90	......
Rupestris × Hybrid Azemar, No. 215:											
Year of planting	1907	1907	1904	1905	......	1904	1904	1905	1904	1904	......
Growth rating	93	85	89	70	......	74	83	70	91	92	......
Rupestris × Petit Bouschet, No. 503:											
Year of planting	1906	......	......	......	......	1904	......	......	......	......	......
Growth rating	95	......	......	......	......	91	......	......	......	......	......
Rupestris × Petit Bouschet Jaeger, No. 504:											
Year of planting	1906	......	......	1904	......	1906	......	......	1907	1907	......
Growth rating	96	......	......	96	......	90	......	......	94	92	......
Rupestris × Riparia, No. 108–16:											
Year of planting	1912	......	1904	......	......	......	1904	......	1904	1904	......
Growth rating	75	......	91	......	......	......	78	......	68	81	......
Salt Creek:											
Year of planting	1906	1906	1903	1904	......	1905	1904	1904	1903	1904	......
Growth rating	91	87	86	85	......	77	92	68	90	84	......
Solonis Robusta:											
Year of planting	1906	1906	1903	1904	1905	1904	1904	1904	1903	1905	1907
Growth rating	84	92	92	93	92	83	88	90	92	90	87
Solonis × (Cordifolia × Rupestris), No. 202–4:											
Year of planting	1909	1907	1904	......	......	1906	1906	......	1906	......	......
Growth rating	60	93	84	......	......	76	84	......	61	......	......
Solonis × Othello:											
Year of planting	1906	1907	......	1904	......	1904	1904	1904	......	1904	......
Growth rating	99	93	......	96	......	87	88	88	......	95	......
Solonis × Othello, No. 1613:											
Year of planting	1906	1906	1903	......	1905	1906	1907	......	1903	......	1907
Growth rating	99	96	100	......	95	90	92	......	100	......	94
Solonis × Riparia, No. 1615:											
Year of planting	1906	1906	1904	......	......	......	1904	1907	1904	1904	1907
Growth rating	93	90	96	......	......	......	91	83	86	89	89
Solonis × Riparia, No. 1616:											
Year of planting	1906	1906	1904	1904	1907	1904	1907	1904	1904	1904	1907
Growth rating	90	91	94	91	86	80	86	80	98	88	94
Taylor Narbonne:											
Year of planting	1906	1907	1904	1904	1907	1904	1904	1904	1904	1904	1907
Growth rating	70	82	89	95	78	70	51	71	91	85	86
Texas:											
Year of planting	......	......	......	......	1905	......	......	......	......	......	......
Growth rating	......	......	......	......	79	......	......	......	......	......	......
Tisserand:											
Year of planting	1906	......	1904	......	......	......	1904	......	1904	......	......
Growth rating	93	......	84	......	......	......	78	......	92	......	......
Viala:											
Year of planting	1906	1907	1904	......	......	1904	......	......	1903	1907	1907
Growth rating	92	86	89	......	......	71	......	......	97	82	87
Viala × Riparia:											
Year of planting	......	......	1904	......	......	1904	1904	1905	1904	1905	......
Growth rating	......	......	77	......	......	70	77	78	69	82	......
Vitis candicans:											
Year of planting	......	......	......	......	......	......	......	1904	1904	......	......
Growth rating	......	......	......	......	......	......	......	65	89	......	......

A number of the resistant-stock varieties have been growing a sufficient length of time to show what may be expected of them under similar conditions. In the following list of stocks that are worthy of special mention as having made excellent growth ratings at each of eleven California experiment vineyards, the varieties are given in the order of their ratings, i. e., the best growers first, and so on:

Chico Varietal Vineyard.—Lenoir; Rupestris de Semis, No. 81–2; Rupestris × Berlandieri, No. 301A; Aramon × Rupestris Ganzin, No. 1; Berlandieri × Riparia, No. 157–11; Columbaud × Riparia, No. 2502; Rupestris Metallica; Rupestris Pillans; Solonis × Othello; Solonis × Othello, No. 1613; Aramon × Rupestris Ganzin, No. 9; Rupestris Othello; Berlandieri × Riparia, No. 420A; Dog Ridge; Hotporup; Monticola × Riparia, No. 18808; (Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5); Barnes.

Colfax Experiment Vineyard.—Rupestris St. George; Mourvedre × Rupestris, No. 1202; Dog Ridge; Solonis × Othello, No. 1613; Berlandieri × Riparia, No. 420A; Riparia × Rupestris, No. 3309; Aramon × Rupestris Ganzin, No. 1; Constantia; Rupestris des Caussettes; Rupestris × Berlandieri, No. 301B; Adobe Giant; Aramon × Rupestris Ganzin, No. 2; Lenoir; Solonis × (Cordifolia × Rupestris), No. 202–4; Solonis × Othello; Monticola × Riparia, No. 18815; Motley; Riparia × Rupestris, No. 101–14.

Fresno Experiment Vineyard.—Mourvedre × Rupestris, No. 1202; Solonis × Othello, No. 1613; Cordifolia × Riparia, No. 125–1; Aramon × Rupestris Ganzin, No. 2; Australis; Riparia France; Constantia; Rupestris des Semis, No. 81–2; Rupestris Pillans; Rupestris St. George; Solonis × Riparia, No. 1615; Aramon × Rupestris Ganzin, No. 9; Monticola × Riparia, No. 18815; Riparia × Rupestris, No. 101; Riparia × Rupestris, No. 3309; Barnes; Monticola × Riparia, No. 18804; Monticola × Riparia No. 18808.

Geyserville Experiment Vineyard.—Mourvedre × Rupestris, No. 1202; Aramon × Rupestris Ganzin, No. 1; Aramon × Rupestris Ganzin, No. 2; Dog Ridge; Riparia × Rupestris, No. 3309; Rupestris St. George; Riparia × Rupestris, No. 101; Riparia × Rupestris, No. 3306; Solonis × Othello; Lenoir; Rupestris Martin; Rupestris Metallica; Taylor Narbonne; Rupestris × Berlandieri, No. 301B; Berlandieri Lafont, No. 9; Solonis Robusta; (Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5); Australis.

Guasti Experiment Vineyard.—Constantia; Dog Ridge; Lenoir; Barnes; Rupestris Metallica; Rupestris Pillans; Rupestris St. George; Solonis × Othello, No. 1613; Arizonica Phoenix; Mourvedre × Rupestris, No. 1202; Riparia Gloire; Riparia Ramond; Rupestris des Caussettes; Solonis Robusta; Berlandieri × Riparia, No. 420A; Pinot × Rupestris, No. 1305; Riparia × Rupestris, No. 3306; Rupestris le Reux.

Livermore Experiment Vineyard.—Mourvedre × Rupestris, No. 1202; Rupestris St. George; Aramon × Rupestris Ganzin, No. 1; Rupestris des Semis, No. 81–2; Monticola × Riparia, No. 18815; Riparia × (Rupestris × Aramon) Jaeger, No. 201; Dog Ridge; Rupestris Metallica; Rupestris Martin; Rupestris Pillans; Riparia × Rupestris, No. 101; Monticola × Riparia, No. 18804; Monticola × Riparia, No. 18808; Riparia × Rupestris, No. 101–14; Solonis × Othello, No. 1613; Australis; Aramon × Rupestris Ganzin, No. 9; Cordifolia × Rupestris.

Lodi Experiment Vineyard.—Aramon × Rupestris Ganzin, No. 1; Riparia × Rupestris, No. 101–14; Mourvedre × Rupestris, No. 1202; Riparia × Rupestris, No. 101; Lenoir; Motley; Aramon × Rupestris Ganzin, No. 9; Dog Ridge; Riparia × Rupestris, No. 3309; Rupestris × Cordifolia, No. 107–11; Berlandieri × Riparia, No. 420A; Riparia × (Rupestris × Aramon) Jaeger, No. 201; Rupestris Metallica; Rupestris Pillans; (Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5); Ramsey; Rupestris Martin; Salt Creek.

Mountain View Experiment Vineyard.—Dog Ridge; Mourvedre × Rupestris, No. 1202; Lenoir; Monticola × Riparia, No. 18804; Aramon × Rupestris Ganzin, No. 1; Aramon × Rupestris Ganzin, No. 2; Riparia × Rupestris, No. 3306; Motley; Solonis Robusta; Berlandieri × Riparia, No. 420A; Riparia × Rupestris, No. 3309; Rupestris × Berlandieri, No. 301A; Solonis × Othello; Riparia × Berlandieri, No. 161–49; Rupestris St. George; Rupestris × Berlandieri, No. 301B; Monticola × Riparia, No. 18808; Monticola × Riparia, No. 18815.

Oakville Experiment Vineyard.—Mourvedre × Rupestris, No. 1202; Rupestris St. George; Solonis × Othello, No. 1613; Barnes; Constantia; Aramon × Rupestris Ganzin, No. 1; Aramon × Rupestris Ganzin, No. 2; Berlandieri × Riparia, No. 420A; Lenoir; Monticola × Riparia, No. 554; Ramsey; Solonis × Riparia, No. 1616; Dog Ridge; Rupestris Metallica; Viala; Rupestris des Semis, No. 81–2; (Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5); (Aestivalis × Rupestris) × Riparia, No. 227.

Sonoma Experiment Vineyard.—Dog Ridge; Lenoir; Monticola × Riparia, No. 18815; Solonis × Othello; Aramon × Rupestris Ganzin, No. 9; Monticola × Riparia, No. 18808; Riparia × Rupestris, No. 3306; Aramon × Rupestris Ganzin, No. 2; Australis; Berlandieri × Riparia, No. 420A; Mourvedre × Rupestris, No. 1202; Monticola × Riparia, No. 18804; Riparia × Rupestris, No. 3309; Riparia × Rupestris, No. 108–103; Adobe Giant; Aramon × Rupestris Ganzin, No. 1; Riparia × (Cordifolia × Rupestris), No. 106–8; Riparia × Rupestris, No. 101–14.

Stockton Experiment Vineyard.—Rupestris St. George; Constantia; Aramon × Rupestris Ganzin, No. 9; Mourvedre × Rupestris, No. 1202; Riparia × Rupestris, No. 101–14; Solonis × Othello, No. 1613; Solonis × Riparia, No. 1616; Monticola × Riparia, No. 18808; Columbaud × Riparia, No. 2502; Monticola × Riparia, No. 18815; Rupestris × Cinerea; Barnes; Riparia × (Cordifolia × Rupestris), No. 106–8; Riparia × Rupestris, No. 101; Lenoir; Riparia × Rupestris, No. 3306; Rupestris des Caussettes; Rupestris × Berlandieri, No. 219A.

Table V gives the resistant varieties in each vineyard which are estimated to have made the best and most creditable growth records as compared to all the varieties under test. The numbers in line with each name in the vineyard columns show the relative growth rating made by the variety in the respective vineyards where it is under test. The highest rating is expressed by the figure 1, the next by 2, and so on. The ratings therefore represent the behavior of each variety under the conditions existing at the several vineyards, expressed in terms that permit comparison with its behavior elsewhere, and in comparison also with other varieties in the same vineyard. To illustrate: Of all the resistant varieties at Livermore the best record was made by Mourvedre × Rupestris, No. 1202 (rated as 1), whereas at Stockton it was fourth best (expressed by 4), and at Sonoma eleventh best (expressed by 11).

TABLE V.—*Resistant-stock varieties of grapes making the best growth records, showing their relative merits in each of eleven experiment vineyards in California.*

Variety.	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Adobe Giant		11								15	
Aramon × Rupestris Ganzin:											
No. 1	4	7		2		3	1	5	6	16	
No. 2		12	4	3				6	7	8	
No. 9	11		12			17	7			5	3
Australis			5	18		16				9	
Barnes	18		16		4				4		12
Berlandieri × Riparia:											
No. 420 A	13	5			15		11	1	8	10	
No. 157-11	5										
Columbaud × Riparia, No. 2502	6										9
Constantia		8	7		1				5		2
Cordifolia × Riparia, No. 125-1			3								
Dog Ridge	14	3		4	2	7	8	1	13	1	
Lenoir	1	13		10	3		5	3	9	2	15
Monticola × Riparia:											
No. 18804			17			12		4		12	
No. 18808	16		18			13		17		6	8
No. 18815		16	13			5		18		3	10
Motley		17					6	8			
Mourvedre × Rupestris, No. 1202		2	1	1	10	1	3	2	1	11	4
Ramsey							16		11		
Riparia Gloire					11						
Riparia × Rupestris:											
No. 101			14	7		11	4				14
No. 101-14		18				14	2			18	5
No. 3306				8	17			7		7	16
No. 3309		6	15	5			9	11		13	
Rupestris des Semis, No. 81-2	2		8			4			16		
Rupestris Martin				11		9	17				
Rupestris Metallica	7			12	5	8	13		14		
Rupestris Pillans	8		9		6	10	14				
Rupestris St. George		1	10	6	7	2		15	2		1
Rupestris × Berlandieri:											
No. 301 A	3							12			
No. 301 B		10		14				16			
Rupestris Cinerea											11
Rupestris × Cordifolia, No. 107-11							10				
Solonis Robusta				16	14			9			
Solonis × Othello	9	15		9				13		4	
Solonis × Othello, No. 1613	10	4	2		8	15			3		6

Table VI gives an alphabetical list of improved American native and Franco-American grape varieties which are being tested on their own roots in the Chico, Colfax, Fresno, Geyserville, Guasti, Livermore, Lodi, Mountain View, Oakville, Sonoma, and Stockton experiment vineyards. The plantings are too young to permit the drawing of conclusions.

TABLE VI.—*Varieties of American native and Franco-American grapes under test on their own roots at eleven experiment vineyards in California.*

[The locations of the tests are indicated by plus (+) marks.]

Varieties.	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Agawam	+	+									
Albania			+								
Alexander Winter	+								+		
Alicante Ganzin	+	+				+					
Alicante × Rupestris Terrace, No. 20	+			+		+					+
Alice	+								+		
Amber Queen	+										
Ambrosia	+										
Amerbonte								+			

Table VI.—*Varieties of American native and Franco-American grapes under test on their own roots at eleven experiment vineyards in California*—Continued.

Varieties.	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
America	+	......	+	+	......	+	......	+	+	+	......
Aminia	......	......	......	......	+	......	......	......	......	......	......
Antoinette	+	......	......	......	......	......	......	......	......	......	......
Arkansas	+	......	......	......	......	......	......	......	+	......	......
Aroma	+	......	......	......	......	......	......	......	......	......	......
Atoka	......	......	......	......	......	......	......	+	......	......	......
August Giant	+	......	......	......	......	......	......	......	......	......	......
Bacchus	+	......	......	......	......	......	......	......	+	......	......
Bailey	+	......	......	......	......	......	......	......	......	......	......
Barry	+	......	......	+	......	+	+	+	......	+	......
Belle	+	......	......	......	......	......	......	......	+	......	......
Berckmans	+	+	......	+	......	......	+	+	+	......	......
Bertha	+	......	......	......	......	......	......	......	......	......	......
Big Extra	+	......	......	......	......	......	......	......	......	......	+
Big Hope	+	......	......	......	......	......	......	......	......	......	......
Bourisquou × Rupestris:											
No. 601	+	......	......	......	......	......	......	......	......	+	+
No. 109–4	+	......	......	+	......	......	......	......	......	......	+
No. 3907	+	......	......	......	......	+	......	+	+	......	......
No. 4306	+	......	......	+	......	......	......	+	......	+	+
No. 4308	+	......	......	......	......	+	......	......	......	......	+
Brighton	+	+	+	......	+	......	......	......	......	......	......
Brilliant	+	......	......	......	......	+	......	......	+	......	......
Campbell	+	......	......	......	......	......	......	......	+	......	......
Canada	+	+	......	......	......	+	......	......	......	......	+
Carignane × Rupestris:											
No. 404	+	......	......	......	......	......	......	......	......	......	+
No. 501	+	......	......	......	......	+	......	......	......	......	+
Castel:											
No. 1028	+	......	......	......	......	......	......	......	......	......	......
No. 19002	+	......	......	......	......	......	......	......	......	......	......
Catawba	+	......	......	......	......	+	......	......	......	......	......
Cayuga	+	......	......	......	......	......	......	......	......	......	......
Centennial	+	+	......	......	......	......	......	......	......	......	......
Chambrill	+	......	......	......	......	......	......	......	+	......	......
Champenel	+	......	......	......	......	......	......	......	......	......	+
Champion	+	......	......	......	......	......	......	......	......	......	......
Chasselas × Rupestris, No. 901	+	......	......	......	......	......	......	+	......	......	+
Clairette Doré Ganzin	......	......	......	+	......	+	......	+	......	+	+
Clevener	......	+	......	......	......	......	......	......	......	......	......
Clinton	+	......	......	......	......	......	......	......	......	......	......
Cloeta	......	......	+	......	......	......	......	+	......	......	......
Cochee	+	......	......	......	......	......	......	......	+	......	......
Colerain	+	......	......	......	......	......	......	......	......	......	......
Collier	+	......	......	......	......	......	......	......	......	......	......
Columbaud × Rupestris	......	......	......	......	......	+	......	......	......	+	......
Concord	+	......	......	+	......	......	+	+	......	......	......
Continental	......	......	......	......	......	......	......	......	+	......	......
Cornucopia	+	+	......	......	......	......	+	......	+	......	......
Cottage	+	......	......	......	......	......	......	......	......	......	......
Couderc:											
No. 101	+	......	......	......	......	......	+	......	......	......	+
No. 201	+	......	......	......	......	......	......	......	......	......	+
No. 503	+	......	......	......	......	......	+	......	......	......	+
No. 704	......	......	......	......	......	......	......	......	......	......	+
No. 1173	......	......	......	......	......	......	......	......	+	......	......
No. 3701	+	......	+	......	+	......	+	......	......	......	+
No. 28 × 112	+	......	......	......	+	......	......	......	......	......	+
No. 43–06	......	......	......	......	......	......	......	......	+	......	......
No. 82 × 32	+	......	......	......	......	......	+	......	......	......	......
No. 84 × 61	+	......	......	......	......	......	......	......	......	......	+
No. 87 × 115	+	......	......	......	......	......	+	......	......	......	+
No. 124 × 30	+	......	......	......	......	......	......	......	......	......	......
No. 132–11	+	......	......	......	......	......	......	......	......	......	......
Cunningham	......	......	......	......	+	......	......	......	+	......	......
Cynthiana	......	......	......	......	......	......	......	......	+	......	......
Delaware	+	......	......	+	+	+	......	+	+	+	......
Diamond	+	......	......	......	......	......	......	......	......	......	......
Duchess	+	......	......	+	......	+	......	+	......	......	......
Early Victor	+	......	......	......	+	......	......	......	+	......	......
Elvira	+	+	......	......	......	......	......	......	......	......	......
Fern Munson	+	......	......	......	......	......	......	+	......	......	......
Governor Ross	+	......	......	......	......	......	......	......	......	......	......
Herbemont	+	......	+	......	......	......	......	......	......	......	......
Herbert	+	......	......	......	......	......	......	......	......	......	......
Hexamer	+	......	......	......	+	......	......	......	......	......	......
Husmann	+	......	......	......	......	......	......	......	......	......	......
Isabella	+	......	......	......	......	+	......	......	......	......	......
Jaeger	......	......	......	......	......	......	......	+	......	+	......
Lampasas	+	......	......	......	......	......	......	......	......	......	......

TABLE VI.—*Varieties of American native and Franco-American grapes under test on their own roots at eleven experiment vineyards in California*—Continued.

Varieties.	Chico.	Colfax.	Fresno.	Geyserville.	Guasti.	Livermore.	Lodi.	Mountain View.	Oakville.	Sonoma.	Stockton.
Lenoir	+	......	......	......	......	......	......	......	......	......	+
Lindley	+	......	......	......	......	......	......	+	......	......	......
Linn	+	......	......	......	......	......	......	......	......	......	......
Lindmar	+	......	......	......	......	......	......	......	+	......	......
Little Blue	+	......	......	......	......	......	......	......	......	......	......
Livingston	+	......	......	......	......	......	......	......	......	......	......
Long John	+	......	......	......	......	......	......	......	......	......	......
Louisiana	+	+	+	......	......	......	......	......	......	......	......
Lucile	+	......	......	......	......	......	......	......	......	......	......
Lukfata	+	......	......	......	......	......	......	......	......	......	......
Manito	+	......	+	......	......	......	......	+	......	+	......
Marguerite	+	+	+	......	+	......	......	+	......	......	......
Martha	+	......	......	......	......	......	......	......	......	......	......
Mary Favorite	+	......	......	......	......	......	......	......	......	......	......
Massasoit	+	......	......	......	......	......	......	......	......	......	......
Maxatawney	+	......	......	......	......	......	......	......	......	......	......
Mericadel	+	......	+	......	......	......	......	+	+	......	......
Merrimac	+	......	......	......	......	......	......	......	......	......	......
Missouri Riesling	+	......	......	......	......	......	......	......	......	......	......
Montefiore	+	......	......	......	......	......	......	......	......	......	......
Moore	+	+	+	+	......	+	+	+	+	+	......
Moyer	+	......	......	......	......	......	......	......	......	......	......
Mrs. Munson	+	......	......	......	+	......	......	......	......	......	......
Muench	+	+	......	......	......	......	......	......	......	......	......
Niagara	+	......	......	+	......	+	+	+	......	+	......
Noah	+	......	......	......	......	......	......	......	......	......	......
Oliatatoo	+	+	......	......	......	......	......	......	......	......	......
Osage	+	......	......	......	......	......	......	......	......	......	......
Olita	+	......	......	......	......	......	......	......	......	......	......
Paradox	+	......	......	......	......	......	......	......	......	......	......
Paragon	+	......	......	......	......	......	......	......	......	......	......
Pardes	+	......	......	+	......	......	+	......	......	......	+
Peabody	+	......	......	......	......	......	......	......	+	......	......
Pearl	+	......	......	......	......	......	......	......	+	......	......
Perkins	+	......	......	......	......	......	......	......	......	......	......
Pierce	......	......	+	+	......	+	......	......	+	......	......
Plant de Carmes	+	......	+	......	......	......	......	+	+	+	......
Plant de Gounay	......	......	......	......	......	......	......	......	+	......	......
Pocklington	+	......	......	......	......	......	......	......	......	......	......
Presley	+	......	......	......	......	......	......	......	+	......	......
Ragan	+	+	......	......	+	......	......	......	......	......	......
Rebecca	+	......	......	+	......	......	+	......	......	......	......
Red Eagle	+	......	......	......	......	......	......	......	......	......	......
Regal	+	......	......	......	......	......	......	......	......	......	......
Requa	+	......	......	......	......	......	......	......	......	......	......
Rockford	+	......	......	......	......	......	......	......	......	......	......
Rogers:											
No. 5	+	......	......	......	......	......	......	......	......	......	......
No. 13	+	......	......	......	......	......	......	......	+	......	......
No. 32	+	......	......	......	......	......	......	......	......	......	......
Rommel	+	......	......	......	......	......	......	......	+	......	+
Siebel No. 14	......	......	......	+	......	......	......	......	......	......	......
Shalah	......	......	......	......	......	......	+	......	......	......	......
Wyoming Red	+	......	......	......	......	......	......	......	......	......	......

To grow vines on resistant stocks successfully, it should be borne in mind that the resistance of vines depends upon the inherent characters of the vine and its adaptation to soil, climatic, and other conditions, and that the resistant quality of the stock is very materially affected by the congeniality of the varieties grafted on it.

CONGENIALITY AND ADAPTABILITY OF VINES.

Two vine varieties are congenial to each other if both top and root flourish when one is grafted on the other. (See Pl. X, fig. 1.) The congeniality would be called perfect when one variety grafted on another behaves as if the stock were grafted with a scion of itself, the union being perfect and the behavior of the vine the same as that of an entire ungrafted plant.

The term "congeniality" as used in this discussion is limited to the relation of vine varieties to the resistant stocks upon which they are grafted. To discriminate properly between adaptability and congeniality and then to determine the congeniality, it is necessary to know the behavior of the resistant varieties as well as the Vinifera varieties on their own roots. If we have grafted vines of which both the stock and the scion varieties are known to be suited to the soil and climatic conditions and they do not respond, we know that congeniality is lacking.

The adaptability of varieties can be closely forecasted, but their congeniality must be determined by actual tests. Without knowledge of its adaptability to existing conditions, the extent to which differences in the behavior of a variety grafted on different stocks are due to congeniality or to adaptability is impossible of determination.

Saccharine and acid determinations of the fruit from grafted vines have been made for a number of years with a view to ascertain whether the quality of the fruit is influenced by the stock upon which the vine is grafted. (See Pl. X.) Such determinations contrasted with the same season's growth ratings of the same vines indicate a close correspondence between these important chemical constituents of the fruit and the congeniality of grafts and stocks as determined by observations, and they afford a useful check on the congeniality ratings.

Similar growth ratings of a variety grafted on various stocks are found to be accompanied by fairly definite percentages of sugar and acid. Under like conditions of growth the sweetness and the acidity of the fruit, as well as its time of ripening, are materially influenced by the congeniality of the scion and stock. The saccharine and acid contents are two of the leading considerations in the money value of the fruit.

In determining the relative congeniality of vine varieties on diverse resistant stocks, these and the relative quantity of fruit produced, the difference in time of ripening, the relative healthfulness and comparative durability of varieties on different resistant stocks, and the relative amount of wood produced are some of the considerations that appear most important.

BEHAVIOR OF GRAPES GRAFTED AND ON THEIR OWN ROOTS.

In Table VII, column 1 gives (1) the variety name, and indented under it (2) the name of the resistant stock on which it is grafted, or if the variety is on its own roots the fact is so stated. Column 2 shows the experiment vineyard in which the growth was tested, use being made of the following abbreviations: C for Chico, Cx for Colfax, F for Fresno, G for Geyserville, Gi for Guasti, L for Lodi, Li for Livermore, M for Mountain View, O for Oakville, S for Sonoma, St for Stockton. Column 3 shows the year in which the stock was planted, thereby indicating its age, and column 4 gives the year of grafting. Column 5 shows the congeniality, or the growth of each variety on the different stocks, expressed in the form of a percentage rating, on a scale in which the growth of the variety when not grafted but growing as an entire plant on its own root under conditions to which it is well adapted is taken as the standard of excellence, that is, 100 per cent. These ratings therefore represent the behavior of each variety grafted on the several stocks under the conditions existing at the vineyard at which it was found, expressed in terms that permit comparison with its behavior when growing as an entire plant on its own roots under favorable conditions and not based on a comparison with other Vinifera varieties grafted on the same stock in the same vineyard. The rating in each case is the average rating made in different seasons to and including the autumn of 1913. To illustrate: Alicante Bouschet, grafted in the Oakville vineyard in 1906 on different resistant stocks, on Aramon × Rupestris Ganzin, No. 1, was rated at 91; on Riparia × Rupestris, No. 3309, at 88; on Mourvedre × Rupestris, No. 1202, at 72; and on Riparia × Rupestris, No. 101, at 55. This shows that Alicante Bouschet, which is well adapted to the conditions there, when grafted on these different stocks at the same time, under the same conditions, in the same vineyard, and with the same treatment, varied in growth and behavior in comparison with the same variety on its own roots in accordance with the above ratings. Column 6 gives the pruning method, s being used for spurs and c for canes. Column 7 gives the weight of prunings per vine; 8, the nodes bearing fruit; 9 and 10, the growth-starting dates in early and late seasons; 11 and 12, the blossoming dates in early and late seasons; 13 and 14, the fruit-setting dates in early and late seasons; 15 and 16, the fruit-ripening dates in early and late seasons. Columns 17 to 21 give the fruit per vine for the seasons from 1909 to 1913, inclusive; 22, the average percentage of sugar, Balling scale; 23, the average acid, as tartaric, per 100 c. c. Column 24 shows the size of the clusters, m indicating medium; m-l, medium to large; l, large; v, very; s, small. Column 25 shows the shape of the clusters, whether round (r), cylindrical (cy), long (l), or tapering (t). Column 26 designates the density of the clusters, whether compact (c), medium (m), or loose (l). Column 27 shows the size of the berry, whether large (l), medium (m), or small (s). Column 28 gives the shape of the berry, whether round (r), oval (o), or oblong (ob). Column 29 shows the color of the berry, whether black (b), red (r), or white (w). Column 30 indicates the purpose for which the fruit is used, whether for table (t), shipping (s), juice (j), wine (w), or storage (st). In this table the nomenclature of varieties has been brought into conformity with the code of the American Pomological Society in so far as it has appeared practicable.

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California.*

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ach-I-Soum:				*P. ct.*		*Lbs.*									
Dog Ridge	O		1910					Mar. 24		May 30		June 3			
Lenoir	O	1904	1910	92	c, s	6.5				May 31	June 1	June 6	June 20		
Actoni Maceron:															
Lenoir	O	1904	1907	89	s	2.9	3 to 4	Mar. 24		May 20	June 5	May 24	June 24	Sept. 26	Oct. 7
Monticola × Rupestris	F	1907	1907	91	s		2 to 5							Oct. 17	
Mourvedre × Rupestris, No. 1202	F	1907	1907	92	c, s	5.5	2 to 5	Mar. 21		May 20	May 25	May 24			
Solonis × Riparia, No. 1616	F	1907	1907	90	c, s	3	2 to 5	Mar. 14	Apr. 1	May 15	May 24	...do....		Sept. 15	
Actoniky:															
Lenoir	O	1904	1907	89	s	3.3	2 to 5	Mar. 24		May 23	June 12	May 29	June 29	Sept. 25	Oct. 6
Monticola × Rupestris	F	1907	1907	89	c, s	3.7	4 to 5	Mar. 21	Apr. 1	May 19	May 23	May 31	June 1	Sept. 21	
Motley	F	1907	1907	87	c, s	3	3 to 5	Mar. 23	Mar. 28	May 18	...do.....	May 30			
Admirable:															
Riparia × Rupestris, No. 3309	O	1904		91	c, s	6.5	2 to 4	Mar. 22		May 15	June 2	May 21	June 19	Sept. 23	Oct. 8
Affenthaler:															
Own roots	Gi	1904		83	s			Mar. 14	Mar. 20	May 26	May 27	June 4		Sept. 15	Sept. 24
Agadia:															
Riparia × Rupestris, No. 3309	O		1910	96	c, s	2				May 25	June 1	June 6	June 16		
Ahmeur bon Ahmeur:															
Lenoir	O	1904	1907	88	s	2.8	3 to 6	Mar. 24		May 20	June 7	May 25	June 19	Sept. 30	Oct. 7
Ajaki Odia:															
Mourvedre × Rupestris, No. 1202	F	1907	1907	97	c, s	4.5	4 to 6	...do.....	Apr. 3	May 18	May 23	May 29		Sept. 3	Oct. 17
Riparia × Rupestris, No. 101	F	1907	1907	88	c, s		3 to 5	Mar. 20	Mar. 30	May 17	May 21	May 27			
Rupestris Metallica	F	1907	1907	85	s	3	3 to 4	...do.....	Apr. 2	May 15	May 23	May 24		Sept. 6	Sept. 21
Ajmi:															
Lenoir	O	1906	1909	88	s	1.5		Mar. 27		June 8	June 13	June 17	June 20		
Aleatico:															
Own roots	Gi	1904		90	s			Mar. 14	Mar. 25	May 29	May 30	June 2	June 5	Sept. 3	Sept. 23
Dog Ridge	O	1904	1906	91	c, s	3.5	2 to 5	Mar. 20		May 23	June 1	May 28	June 17	Sept. 21	Oct. 6
Lenoir	O	1903	1905	88	s	3.8	2 to 4	Mar. 16		May 21	June 3	May 26	June 19	...do.....	Oct. 5
Rupestris St. George	O	1903	1905	93	c, s	3	2 to 4	Mar. 18		May 26	...do.....	June 1	June 17	Sept. 22	Oct. 2
Taylor Narbonne	O	1904	1906	81	s	3.2	2 to 5	Mar. 17		May 25	June 8	May 30	June 15	Oct. 4	

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Alexandria:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904	....	78	s	....	....	Mar. 26	Apr. 1	May 23	...do.....	June 2	...do.....	Sept. 16	Sept. 24
Adobe Giant	F	1904	1906	86	s	1.3	2 to 6	Mar. 13	...do.....	May 14	May 26	May 25	June 2	Sept. 4	Sept. 20
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	83	s	1.5	3 to 5	Mar. 14	...do.....	May 15	May 24	May 29	June 1	Sept. 12	Sept. 22
Aramon × Rupestris Ganzin, No. 2	F	1907	1909	87	s	2.5	....	Apr. 1	....	May 22	....	....	....	Sept. 15	Sept. 27
Australis	F	1907	1909	88	s	3	....	...do.....	....	May 21	....	....	....	Oct. 16	
Berlandieri × Riparia, No. 420A	F	1907	1909	89	s	2	....	Mar. 24	....	...do.....	....	....	....	Sept. 15	Oct. 16
Constantia	F	1907	1909	87	s	2.5	....	Mar. 23	....	May 25	....	....	....	....	
Dog Ridge	F	1904	1906	90	s	2.3	2 to 5	Mar. 14	Apr. 6	May 23	May 29	May 28	June 11	Sept. 8	Sept. 20
Herbemont	F	1903	1905	82	s	1.3	3 to 5	...do.....	Apr. 1	May 12	May 30	...do.....	June 8	...do.....	Do.
Lenoir	F	1903	1905	85	s	1.5	2 to 5	Mar. 18	...do.....	May 14	May 29	May 24	June 5	Sept. 9	Sept. 15
Monticola × Riparia, No. 18808	F	1907	1909	86	s	3	....	Mar. 29	....	May 20	....	....	....	Oct. 16	
Monticola × Rupestris	F	1907	1909	88	s	3.6	....	Mar. 27	....	May 25	....	....	....	...do.....	
Mourvedre × Rupestris, No. 1202	F	1904	1906	86	s	2.5	3 to 5	Mar. 13	Apr. 3	May 14	June 1	May 24	June 10	Sept. 4	Sept. 20
Riparia Gloire	F	1903	1905	83	s	4	3 to 6	Mar. 14	Apr. 1	May 13	May 30	May 25	June 9	Sept. 9	Do.
Riparia × (Cordifolia × Rupestris, No. 106-8)	F	1907	1909	87	s	5.5	....	Mar. 24	....	May 20	....	....	....	Oct. 16	
Riparia × Rupestris, No. 101	F	1904	1906	90	c, s	2	2 to 5	Mar. 12	Apr. 5	...do.....	May 31	May 28	June 7	Sept. 5	Sept. 20
Riparia × Rupestris, No. 101-14	F	1907	1909	89	s	3.5	....	Mar. 25	....	May 26	....	....	....	Oct. 16	
Riparia × Rupestris, No. 3306	F	1907	1909	87	s	2.5	....	Mar. 31	....	May 23	....	....	....	....	
Riparia × Rupestris, No. 3309	F	1904	1906	91	s	4	1 to 5	Mar. 13	Apr. 5	May 18	May 29	May 28	June 5	Sept. 5	Sept. 20
Rupestris Martin	F	1903	1905	85	s	1.6	2 to 5	Mar. 8	Apr. 1	May 13	May 31	May 27	...do.....	Sept. 8	Do.
Rupestris St. George	F	1903	1905	89	s	2	2 to 5	Mar. 14	...do.....	May 15	May 28	May 26	...do.....	...do.....	Do.
Rupestris × Berlandieri, No. 219A	F	1907	1908	87	s	3	....	Apr. 1	....	May 22	....	....	....	....	
Salt Creek	F	1903	1905	86	s	1.6	3 to 6	Mar. 7	Apr. 1	May 16	May 29	May 21	June 3	Sept. 10	Sept. 20
Solonis Robusta	F	1907	1909	84	s	1	....	Mar. 29	May 22	....	....	....	....	....	
Solonis × Othello, No. 1613	F	1907	1909	86	s	3	....	Mar 8	....	May 25	....	....	....	Oct. 16	
Solonis × Riparia, No. 1616	F	1904	1906	88	s	2.4	2 to 5	Mar. 14	Apr. 5	May 22	May 30	May 27	June 8	Sept. 4	Sept. 20
Taylor Narbonne	F	1904	1906	85	s	1.8	3 to 5	Mar. 13	Apr. 1	May 13	May 29	...do.....	June 4	Sept. 15	Do.
Viala	F	1907	1911	80	s	1	....	Mar. 25	....	May 20	....	....	....	....	

Alicante:															
Own roots	Gi	1905			s			Mar. 22		do	May 25	May 26	May 29		
Lenoir	F	1903	1905	84	s	.8	3 to 5	Mar. 14	Apr. 1	May 15	May 20	May 20	May 26	Aug. 25	Sept. 20
Riparia × Rupestris, No. 3306	O	1904			c, s	2.5		Mar. 4		May 9	May 29	May 15	June 2		
Rupestris St. George	F	1903	1905	87	s	1	3 to 5	Mar. 14	Apr. 3	May 12	May 18	May 22	May 24	Aug. 25	Sept. 19
Alicante (Black Alicante):															
Own roots	Gi	1905			s			Mar. 12	Mar. 28	May 26	May 27	May 30			
Alicante Bouschet:															
Own roots	Gi	1904			c, s			Mar. 15	do	May 10	May 29	May 31	June 4	Sept. 15	Sept. 23
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5)	O	1907	1909	78	s	.8	2 to 3	Mar. 18		May 25	June 1	June 6		Oct. 5	Oct. 30
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	91	s	3.8	2 to 5	do		May 6	do	May 30	June 19	Sept. 25	Oct. 9
Aramon × Rupestris Ganzin, No. 2	O	1907	1909	68	s	.7		do		June 1		June 6			
Berlandieri × Riparia, No. 420A	O	1907	1909	85	s	2	2 to 3	Mar. 20		May 25	June 2	do	June 9	Oct. 5	Oct. 10
Constantia	O	1907	1909	80	s	.5	2 to 3	Mar. 17		May 26	June 1	June 4	June 19	Sept. 25	
Dog Ridge	O	1903	1905	88	s	3.3	2 to 4	Mar. 20		May 21	June 5	May 27	June 22	Sept. 21	Oct. 10
Herbemont	O	1903	1905	79	s	1.9	2 to 6	Mar. 22		May 19	June 1	May 24	June 6	Sept. 29	Oct. 5
Lenoir	O	1903	1905	88	s	3.4	2 to 6	Mar. 24		May 21	June 3	May 26	June 14	Sept. 28	Oct. 15
Monticola × Riparia, No. 18808	O	1907	1909	91	s	1.7		Mar. 16		June 1		June 6	June 17		
Monticola × Riparia, No. 18815	O	1907	1909	83	s	2	2 to 4	Mar. 24		May 29	June 1	June 5	June 20	Oct. 5	Oct. 10
Mourvedre × Rupestris, No. 1202	O	1904	1906	72	s	.5	3 to 5	Mar. 18		May 28		June 6			
Riparia × Rupestris, No. 101	O	1904	1906	55	s	1.6	2 to 6			May 24	June 1	May 30	June 5	Sept. 28	Oct. 11
Riparia × Rupestris, No. 101–14	O	1907	1909	75	s	1.4		Mar. 18		June 1		June 5			
Riparia × Rupestris, No. 3306	O	1907	1909	88	s	1.5	3 to 4	do		do	June 8	June 6	June 20	Oct. 11	Oct. 12
Riparia × Rupestris, No. 3309	O	1904	1906	88	s	2.2	2 to 5	do		May 25	June 1	May 30	June 11	Sept. 26	Oct. 6
Rupestris Martin	O	1903	1905	91	s	3.7	2 to 6	Mar. 31		May 20	do	May 25	June 12	do	Do.
Rupestris Metallica	O	1907	1909	80	s	.5		Mar. 20		May 31		June 4			
Rupestris Mission	O	1907	1909	64	s	1		do		June 2	June 3	June 7	June 15		
Rupestris St. George	O	1903	1905	88	s	3.3	2 to 4	Mar. 19		May 22	June 5	May 25	June 17	Sept. 25	Oct. 10
Salt Creek	O	1903	1905	88	c, s	1.4	3 to 6			May 21		May 26		Sept. 27	Oct. 6
Solonis Robusta	O	1907	1909	85	s	1.5		Mar. 18		May 28	June 1	June 4	June 15		
Solonis × Othello, No. 1613	O	1907	1909	85	s	1.5	2 to 3	Mar. 20		June 2	June 5	June 8	do	Sept. 25	
Solonis Riparia, No. 1616	O	1904	1906	78	s	1.8	2 to 5	Mar. 18		May 26	June 3	June 2	June 20	do	Oct. 5
Taylor Narbonne	O	1904	1906	84	s	3	2 to 5	Mar. 17		May 27	June 1	do	June 16	Sept. 26	Oct. 8
Almeria:															
Own roots	Gi	1904			s			Mar. 15	Mar. 28	June 3	June 6	June 13			
Herbemont	O	1904	1908	89	s	3.2	2 to 5	Mar. 20		do	June 8	June 9	June 30	Oct. 1	Oct. 10
Lenoir	O	1903	1908	86	s	1.3	2 to 7	Mar. 19		June 1	June 10	June 6	June 29	Sept. 25	Oct. 12
Riparia × Rupestris, No. 101	O	1904	1908	91	s	3	2 to 5	Mar. 18		June 3	June 8	June 9	do	Sept. 24	Oct. 10
Riparia × Rupestris, No. 3309	O	1904	1908	94	s	.26	3 to 6	Mar. 24		May 31	June 1	June 5	June 15	do	Oct. 12
Solonis × Riparia, No. 1616	O	1904	1908	91	s	3.2	2 to 6	Mar. 22		do	June 2	June 7	do	Sept. 26	Oct. 1
Aneb el Cadi:															
Adobe Giant	F	1907	1907	96	c, s	9.7	3 to 4	Mar. 23	Apr. 6	May 18	May 22	June 6		Sept. 15	Sept. 21
Lenoir	O	1904	1907	89	c, s	3.2	3 to 4	Mar. 22		May 20	June 7	May 24	June 19	Sept. 29	Oct. 20
Monticola × Rupestris	F	1907	1907	97	c, s	8		Mar. 10	Apr. 5	May 23	May 25	June 11			
Mourvedre × Rupestris, No. 1202	F	1907	1907	93	c, s	5	2 to 6	Mar. 22	Mar. 30	May 16	May 21	May 26		Oct. 17	
Riparia Grand Glabre	F	1907	1907	96	c, s	9.6	2 to 4	Mar. 14	Apr. 5	May 19	May 28	June 5		do	
Angeiina:															
Adobe Giant	F	1907	1907	93	c, s	3.25	3 to 6	Mar. 23	Mar. 28	May 14	May 23	May 20			
Lenoir	O	1904	1907	95	s	3.8	2 to 5	Mar. 18		May 22	June 3	May 27	June 16	Sept. 30	Oct. 7
Mourvedre × Rupestris, No. 1202	F	1907	1907	94	c, s	4.6		Mar. 24	Apr. 1	May 15	May 29	May 24		Sept. 5	

Table VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Aramon:				*P. ct.*		*Lbs.*									
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	91	s	3.1	3 to 5	Mar. 19		May 22	June 3	May 28	June 17	Sept. 28	Oct. 20
Australis	F	1907	1907	90	c, s	2.5	2 to 5	Mar. 14	Mar. 25	May 5	May 21	May 23		Sept. 17	Sept. 21
Barnes	F	1907	1907	87	s	1.9	2 to 5	Mar. 18	Mar. 28	May 14	May 22	May 27		Sept. 10	Do.
Cornucopia	F	1907	1907	84	c, s	2	3 to 6	Mar. 12	Mar. 26	May 10	May 21	May 23		...do...	Sept. 21
De Grassett	F	1907	1907	91	c, s	3	3 to 7	...do...				...do...		Sept. 20	Oct. 17
Dog Ridge	O	1903	1905	92	s	3.1	3 to 6	Mar. 18		May 22	June 3	May 28	June 16	Sept. 29	Oct. 25
Herbemont	O	1903	1905	90	s	4.3	2 to 6	...do...		...do...	June 10	May 27	June 24	Oct. 5	Oct. 12
Hotporup	F	1907	1907	83	c, s	3	3 to 6	...do...	Apr. 1	May 16	May 21	May 25		Oct. 17	
Lenoir	O	1903	1905	93	s	3.7	2 to 5	Mar. 22		May 21	May 31	May 27	June 15	Sept. 27	Oct. 15
Monticola × Rupestris	F	1907	1907	86	c, s	3.5	3 to 5	Mar. 15	Mar. 28	May 14	May 23	May 24			
Mourvedre × Rupestris, No. 1202	O	1904	1906	90	s	2.8	3 to 5	Mar. 20		May 22	June 3	May 28	June 20	Sept. 27	Oct. 11
Ponroy	F	1907	1907	87	s	3.07	3 to 6	Mar. 19	Mar. 28	May 15	May 23	May 27		Sept. 16	Sept. 21
Ramsey	F	1907	1907	92	c, s	3.5	3 to 5	Mar. 12	Mar. 25	May 14	May 20	May 24			
Riparia × Rupestris, No. 101	F	1907	1907	82	s	2.5		Mar. 20	Mar. 28	May 10	May 23			Sept. 16	Sept. 21
Do	O	1907	1907	87	s	2.3	2 to 5	Mar. 18		May 19	June 2	May 24	June 14	Sept. 27	Oct. 15
Riparia × Rupestris, No. 3309	O	1904	1906	87	s	1.5	3 to 5	Mar. 20		May 20	June 1	May 26	June 11	...do...	Oct. 8
Riparia × Rupestris de Jaeger	F	1907	1907	83	s	3.2	3 to 5	Mar. 12	Apr. 1	May 16	May 21	...do...		Sept. 21	
Rupestris des Caussettes	F	1907	1907	85	c, s	2		Mar. 15	Mar. 26	May 15	May 22	May 29			
Rupestris des Semis, No. 81-2	F	1907	1907	88	s	3	2 to 5	Mar. 13	Mar. 28	May 12	...do...	May 23		Sept. 17	Sept. 21
Rupestris Martin	F	1907	1907	87	s	3.08	3 to 6	Mar. 15	Mar. 26	May 14	...do...	May 25		Sept. 10	Do.
Do	O	1903	1905	91	s	3.5	1 to 5	Mar. 20		May 24	May 31	May 30	June 11	Sept. 27	Oct. 13
Rupestris St. George	O	1903	1905	92	s	3.7	3 to 6	Mar. 18		May 22	June 1	May 27	June 13	Sept. 28	Oct. 10
Rupestris × Berlandieri, No. 219A	F	1907	1907	87	c, s	2	2 to 5	Mar. 12	Apr. 1	May 12	May 21	May 28		Oct. 17	
Salt Creek	F	1907	1907	88	s	3.2	3 to 5	Mar. 11	Mar. 28	May 10	May 23	May 25		Sept. 8	Sept. 21
Do	O	1903	1905	91	s	2.1	1 to 5	Mar. 18		May 23	June 3	May 29	June 19	Sept. 26	Oct. 11
Solonis × Othello	F	1907	1907	85	s	1.9	3 to 5	...do...	Mar. 25	May 14	May 23	May 25		Sept. 16	Sept. 21
Solonis × Riparia, No. 1616	F	1907	1907	86	s	2.8	3 to 7	...do...	Mar. 30	May 17	May 21	May 28		...do...	Do.
Do	O	1904	1906	85	s	1.3	3 to 5	Mar. 20		May 22	June 2	...do...	June 20	Sept. 27	Oct. 13
Taylor Narbonne	O	1904	1906	89	s	3.6	3 to 6	...do...		May 21	June 5	May 26	...do...	Sept. 26	Oct. 15
Do	F	1907	1907	84	s	4		Mar. 22		May 22				Sept. 21	Sept. 26
Valencia	F	1907	1907	91	s	2.6	3 to 6	Mar. 16	Mar. 30	May 12	May 21	May 23		...do...	Oct. 5
Vermorel	F	1907	1907	89	c, s	2.6	3 to 5	Mar. 10	Mar. 26	May 15	May 23	May 29		Sept. 10	Sept. 21
Viala	F	1907	1907	90	c, s	5	3 to 5	Mar. 20	Mar. 30	May 14	May 25	May 24		Sept. 16	Oct. 17

Askari:															
Own roots	Gi	1904			s			Mar. 24	Apr. 1	May 28	May 30	June 6			
Aspiran Noir:															
Own roots	Gi	1904			s			Mar. 12	Mar. 30	May 24	...do...	May 29	June 6	Sept. 20	Sept. 25
Augulato:															
Adobe Giant	F	1907	1907	80	c, s			Mar. 29		May 23					
Lenoir	O	1904	1907	88	s	3.3	3 to 5	Mar. 17		May 26	June 4	May 30	June 15	Sept. 30	Oct. 10
Baba:															
Own roots	Gi	1904			s			Mar. 18	Mar. 28	May 24	May 30	May 29	June 5	Aug. 29	Sept. 21
Dog Ridge	O	1904	1906	91	s	3.3	2 to 3	Mar. 24		May 25	June 5	June 7	June 21	Sept. 26	Oct. 10
Lenoir	O	1903	1905	90	s	3.3	2 to 4	...do...		May 23	...do...	May 29	June 20	Sept. 25	Oct. 6
Rupestris St. George	O	1903	1905	94	s	3.5	3 to 5	Mar. 21		May 20	...do...	May 26	June 18	Sept. 28	Oct. 8
Taylor Narbonne	O	1906	1906	90	s	3	2 to 5	...do...		May 23	June 8	May 28	June 20	Sept. 26	Oct. 10
Bakator:															
Own roots	Gi	1904		75	s			Mar. 14	Mar. 28	May 25	June 4	May 29	June 10	Sept. 25	
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	90	s	3.5	2 to 4	Mar. 20		May 26	June 5	June 2	June 24	Sept. 22	Oct. 4
Dog Ridge	O	1904	1906	85	s	1.4		...do...		...do...	...do...	May 30	June 18	Sept. 23	Oct. 10
Lenoir	O	1903	1908	83	s	2.5	3 to 4	Mar. 19		May 24	June 10	May 28	June 15	Sept. 21	
Riparia × Rupestris, No. 101	O	1904	1904	90	s	4.4	3 to 4	Mar. 20		May 22	June 3	May 27	June 16	Sept. 23	Oct. 9
Riparia × Rupestris, No. 3309	O	1904	1906	88	c, s	3.5	3 to 4	Mar. 18		May 26	...do...	June 2	June 14	Sept. 20	Oct. 11
Rupestris St. George	F	1903	1905	90	s	3.2	2 to 5	Mar. 13	Mar. 30	May 17	May 22	May 24	May 28	Aug. 24	Sept. 19
Solonis × Riparia, No. 1616	O	1904	1906	89	s	3.4	3 to 5	Mar. 18		May 23	June 10	May 28	June 28	Sept. 22	Oct. 7
Taylor Narbonne	O	1904	1906	93	s	4.3	3 to 4	Mar. 21		May 26	June 5	June 2	June 19	...do...	Oct. 4
Barbarossa:															
Own roots	Gi	1905			c, s			Mar. 14	Apr. 1	May 25	May 27	May 30	June 3	Sept. 24	
Adobe Giant	F	1904	1906	87	c, s	1.9	3 to 5	Mar. 9	...do...	May 13	May 16	May 22	May 27	Aug. 25	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	93	c, s	4.1	2 to 6	Mar. 14	Mar. 30	...do...	May 20	May 23	May 26	Sept. 10	Sept. 20
Dog Ridge	F	1904	1906	87	s	2.7	3 to 6	Mar. 12	...do...	May 15	...do...	May 25	...do...	Sept. 15	Do.
Do	O	1904	1906	96	c, s	5.5	2 to 4	Mar. 19		May 25	June 1	May 30	June 21	Sept. 27	Oct. 5
Lenoir	F	1903	1905	82	s	1	3 to 6	Mar. 18	Mar. 28	May 15	May 20	May 20	May 29	Aug. 24	Sept. 19
Do	O	1903	1905	89	s	2.8	3 to 5	Mar. 19		May 19	June 1	May 25	June 12	Sept. 25	Oct. 15
Riparia Gloire	F	1903	1905	84	s	2.7	3 to 6	Mar. 11	Apr. 1	May 10	May 16	May 20	May 26	Aug. 24	Sept. 19
Riparia × Rupestris, No. 3309	F	1904	1906	89	s	2.2	3 to 6	Mar. 8	Apr. 5	...do...	May 18	May 22	May 28	Sept. 12	Sept. 20
Rupestris St. George	F	1903	1905	85	s	2.9	3 to 6	Mar. 13	Mar. 30	May 13	May 16	May 21	May 29	Aug. 24	Sept. 19
Do	O	1903	1905	92	c, s	4.9	3 to 6	Mar. 19		May 24	June 2	May 30	June 14	Sept. 25	Oct. 10
Solonis × Riparia, No. 1616	F	1904	1906	87	s	1.9	3 to 6	Mar. 16	Mar. 28	May 13	May 18	May 23	May 25	Aug. 25	Sept. 2
Taylor Narbonne	O	1904	1906	89	s	2	2 to 5	Mar. 20		May 26	June 1	June 2	June 12	Sept. 25	Oct. 5
Barbarossa Finnebourgo:															
Own roots	Gi	1904			c, s			Mar. 13	Apr. 3	May 27	May 30	May 31	June 5	Aug. 28	Sept. 23
Barbera:															
Own roots	Gi	1904			s			Mar. 15	Mar. 30	May 22	...do...	May 27	...do...	Aug. 29	Sept. 20
Dog Ridge	O	1904	1907	83	s	2.3	2 to 4	Mar. 18		May 19	June 3	May 24	June 15	Sept. 24	
Lenoir	O	1903	1905	87	s	2.6	3 to 4	...do...		May 26	June 5	May 30	June 14	Sept. 20	Oct. 5
Rupestris St. George	O	1903	1905	86	s	1.9	3 to 5	Mar. 19		...do...	June 2	June 1	June 13	Sept. 22	Sept. 27
Taylor Narbonne	O	1904	1906	85	s	.9	2 to 3	Mar. 17		...do...	May 31	June 2	June 10	...do...	Oct. 10
Barducci:															
Adobe Giant	F	1907	1907	79	s	1.5		Mar. 12	Mar. 25	May 12	May 21	May 23		Sept. 15	Sept. 21
Lenoir	O	1904	1907	88	s	2	2 to 5	Mar. 22		May 21	June 5	May 26	June 17	Sept. 26	

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bastardo:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904		86	c, s			Mar. 15	Mar. 20	May 26	June 3	May 31	June 10	Aug. 26	Sept. 20
Dog Ridge	O	1904	1906	92	c, s	4.5	3 to 4	Mar. 17		May 27	June 5	June 3	June 20	Sept. 23	Oct. 2
Lenoir	O	1903	1905	90	c, s	5.3	2 to 3	Mar. 15		May 19	May 21	May 24	June 19	Sept. 20	Sept. 24
Rupestris St. George	O	1903	1905	93	s	4.5	2 to 4	Mar. 23		May 22	June 1	May 28	June 15	Sept. 25	Oct. 10
Taylor Narbonne	O	1904	1906	92	s	4.8	2 to 3	Mar. 19		May 28	do.	June 4	do.	do.	Oct. 8
Beclan:															
Own roots	Gi	1904			s			Mar. 17	Mar. 30	May 24	May 30	May 29	June 7	Sept. 16	Sept. 25
Dog Ridge	O	1904	1906	90	s	3.6	2 to 4	Mar. 21		May 20	June 8	May 24	June 20	Sept. 28	Oct. 15
Lenoir	O	1903	1905	88	s	2.8	2 to 4	Mar. 19		May 22	do.	May 27	June 22	do.	Do.
Rupestris St. George	O	1903	1905	83	s	2.6	2 to 5	Mar. 16		do.	May 31	do.	June 16	Sept. 26	Oct. 10
Taylor Narbonne	O	1904	1906	83	s	1.3	2 to 5	Mar. 18		May 23	June 1	May 28	June 11	Sept. 29	Do.
Bellino:															
Own roots	Gi	1904			s			Mar. 17	Apr. 1	May 27					
Adobe Giant	F	1904	1906	88	s	1.2	3 to 5	Mar. 13	Mar. 28	May 15	May 20	May 20	May 31	Aug. 25	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	93	c, s	4.5	3 to 6	do.	Mar. 25	May 16	do.	May 24	June 1	do.	Sept. 20
Dog Ridge	F	1904	1906	90	s	5.1	3 to 5	Mar. 11	Apr. 2	May 15	May 29	May 25	June 7	Aug. 24	Do.
Do	O	1904	1906	87	s	3.3	3 to 4	Mar. 24		May 24	June 8	May 29	June 13	Sept. 26	Oct. 8
Lenoir	F	1903	1905	88	s	1.3	3 to 6	Mar. 7	Mar. 30	May 12	May 16	May 21	May 24	Aug. 25	Sept. 13
Do	O	1903	1905	92	s	4.2	3 to 5	Mar. 18		May 26	June 1	June 2	June 20	Sept. 25	
Mourvedre × Rupestris, No. 1202	F	1904	1906	88	c, s	4.2	3 to 6	Mar. 6	Apr. 1	May 20	May 26	May 21	June 1	Aug. 25	Sept. 20
Ponroy	F	1907	1907	93	c, s	3		Mar. 15	do.	May 15	May 22	May 28		Oct. 17	
Riparia × Rupestris, No. 101	F	1904	1906	90	s	3.1	3 to 5	do.	Mar. 28	May 12	May 20	May 25	May 28	Aug. 25	Sept. 10
Riparia × Rupestris, No. 3309	F	1904	1906	92	c, s	1	3 to 6	Mar. 7	Apr. 1	May 8	do.	May 24	May 27	do.	Sept. 20
Rupestris des Caussettes	F	1907	1907	83	c, s	2		Mar. 20		May 22					
Rupestris St. George	F	1903	1905	89	s	3.7	2 to 5	Mar. 12	Mar. 28	May 10	May 20	May 22	May 25	Aug. 25	Sept. 19
Do	O	1903	1905	93	s	3.4	3 to 5	Mar. 14		May 22	June 1	May 28	June 13	Sept. 26	Sept. 30
Solonis × Riparia, No. 1616	F	1904	1906	87	s	1.8	2 to 5	Mar. 7	Mar. 25	May 16	May 20	May 25	May 27	Aug. 25	Sept. 20
Taylor Narbonne	F	1904	1906	87	c, s	3.7	3 to 5	Mar. 18	do.	May 13	May 25	May 22	May 30	do.	Do.
Do	O	1904	1906	90	s	3	2 to 3	Mar. 22		May 21	June 1	May 26	June 14	Sept. 24	Oct. 8
Vermorel	F	1907	1907	86	s	3.5		Mar. 20		May 23				Oct. 16	

Bengi:															
Own roots	O	1904	......	......	s	......	......	Mar. 25	......	June 10	June 13	June 16	June 25	......	
Bermestia Bianca:															
Rupestris St. George	F	1903	1905	88	s	2.4	3 to 7	Mar. 12	Mar. 20	May 10	May 15	May 20	May 30	Aug. 24	Sept. 19
Besson:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 15	Mar. 29	May 30	June 3	June 3	June 8	Aug. 27	Sept. 25
Bhokri:															
Own roots	O	1904	......	......	s	3.5	......	Mar. 20	......	May 12	June 5	May 18	June 18	......	
Bicane:															
Adobe Giant	F	1904	1906	85	......	2.1	2 to 5	Mar. 24	Apr. 2	May 17	May 22	May 27	June 6	Aug. 25	Sept. 21
Australis	F	1907	1907	88	s	2	2 to 5	Mar. 20	Apr. 3	May 16	May 24	May 25	......	...do...	Oct. 17
Barnes	F	1907	1907	94	s	......	3 to 6	...do...	......	May 21	......	......	......	......	
Berlandieri × Riparia, No. 420B	F	1907	1907	85	s	4	......	Mar. 21	Apr. 1	May 15	May 25	May 30	......	......	
Constantia	F	1907	1907	88	c, s	3.6	3 to 5	Mar. 22	Mar. 30	May 18	May 24	June 4	......	Aug. 25	Sept. 21
De Grassett	F	1907	1907	85	c, s	5.4	4 to 5	Mar. 23	Apr. 1	May 12	...do...	May 25	......	......	
Dog Ridge	O	1904	1907	86	s	3	3 to 5	Mar. 18	......	May 23	June 1	May 29	June 20	Sept. 23	Oct. 4
Lenoir	O	1903	1905	86	s	2.9	2 to 6	Mar. 19	Mar. 21	May 20	June 4	May 25	June 17	...do...	Oct. 17
Monticola × Rupestris	F	1907	1907	86	c, s	3	4 to 6	Mar. 23	Apr. 3	May 15	May 24	May 28	May 30	Sept. 15	Oct. 7
Ponroy	F	1907	1907	93	c, s	7.7	4 to 6	Mar. 17	...do...	...do...	May 21	May 23	May 28	......	
Ramsey	F	1907	1907	90	c, s	5.7	4 to 6	Mar. 21	...do...	May 14	May 24	May 29	......	Aug. 25	Sept. 21
Riparia Gloire	O	1904	......	89	c, s	6	2 to 5	Mar. 19	......	May 10	June 5	May 16	June 17	Sept. 28	Oct. 4
Riparia × Rupestris, No. 3306	O	1904	......	93	c, s	4.5	......	......	......	May 19	June 3	May 24	June 10	......	
Riparia × Rupestris, No. 3309	F	1907	1907	96	c, s	10	4 to 5	Mar. 19	Apr. 1	May 17	May 22	May 30	......	Aug. 25	Sept. 20
Rupestris des Caussettes	F	1907	1907	85	s	4	......	Mar. 25	Apr. 3	May 18	May 20	May 29	......	......	
Rupestris St. George	O	1903	1905	92	s	4.4	2 to 4	Mar. 22	......	May 26	June 3	June 2	June 20	Sept. 24	Sept. 30
Do	F	1903	1905	85	s	2.8	2 to 6	Mar. 11	Mar. 30	May 13	May 18	May 20	May 25	Aug. 24	Sept. 19
Rupestris × Berlandieri, No. 219A	F	1907	1907	81	s	2	......	Apr. 3	......	May 15	......	May 26	......	......	
Solonis Robusta	F	1907	1907	94	c, s	7.1	3 to 5	Mar. 12	Apr. 1	May 14	May 21	May 24	......	Sept. 17	Sept. 21
Taylor Narbonne	O	1904	1906	70	s	1	......	Mar. 20	......	May 21	May 26	......	......	......	
Viala	F	1907	1907	88	c, s	5	......	Mar. 23	......	May 22	......	......	......	Aug. 25	Sept. 20
Black Corinth:															
Own roots	Gi	1904	......	......	c, s	......	......	Mar. 16	Mar. 27	May 28	June 6	June 1	June 11	Sept. 17	Oct. 10
Black Hamburg:															
Own roots	Gi	1905	......	......	s	......	......	Mar. 10	Apr. 1	May 25	May 30	May 30	......	Aug. 28	Sept. 28
Black Kapadjulari:															
Dog Ridge	O	1904	1906	96	s	4.4	3 to 4	Mar. 13	......	May 30	May 31	June 5	June 12	Sept. 27	
Lenoir	O	1904	1906	85	s	2.1	2 to 4	Mar. 20	......	May 25	June 5	May 28	June 23	Oct. 1	Oct. 15
Black Morocco:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 21	Apr. 3	May 26	June 12	June 3	June 19	Sept. 24	Sept. 25
Black Muscat:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 28	Mar. 30	...do...	June 7	May 31	June 10	Sept. 15	Sept. 24
Black Prince:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 16	Mar. 28	...do...	June 5	...do...	June 11	...do...	Sept. 25
Dog Ridge	O	1904	1906	93	s	6.5	2 to 4	Mar. 26	......	...do...	June 11	June 2	June 24	Sept. 28	Oct. 8
Lenoir	O	1903	1905	95	c, s	4.8	3 to 5	...do...	......	May 22	June 7	May 28	June 16	...do...	Oct. 9
Rupestris St. George	O	1903	1905	93	s	6.8	2 to 4	Mar. 24	......	...do...	June 5	May 27	June 21	Sept. 26	Oct. 10
Taylor Narbonne	O	1904	1906	92	s	3	3 to 6	...do...	......	May 27	June 10	June 2	June 19	Sept. 24	Do.
Black Shahanee:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 12	Apr. 1	...do...	June 1	June 7	......	Sept. 20	
Black Zante:															
Own roots	Gi	1904	......	......	c, s	......	......	Mar. 24	Mar. 26	May 29	June 6	June 3	June 13	...do...	Sept. 24

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Blanc d'Ambre:				*P. ct.*		*Lbs.*									
Lenoir	O	1904	1907	86	s	2.7	3 to 5	Mar. 17		May 18	May 31	May 23	June 14	Sept. 25	Sept. 25
Monticola × Rupestris	F	1907	1907	80	s	1.8	3 to 5	Mar. 15	Mar. 25	May 14	May 22	May 24			
Mourvedre × Rupestris, No. 1202	F	1907	1907	83	s	3.5		Mar. 14	do	May 13		May 25		Sept. 15	
Salt Creek	F	1907	1907	92	s	5	4 to 5	Mar. 24	Apr. 1	May 12	May 22	May 29			
Blauer Portugieser:															
Own roots	Gi	1904			s			Mar. 17	Mar. 29	May 24	May 28	May 30	June 7	Aug. 28	Sept. 20
Dog Ridge	O	1904	1906	92	s	5.2	3 to 4	Mar. 18		May 25	June 1	do	June 13	Sept. 23	Oct. 8
Lenoir	O	1903	1905	92	s	4	3 to 5	do		May 19	May 31	May 25	June 4	Sept. 10	Oct. 2
Rupestris St. George	O	1903	1905	89	s	2.7	2 to 4	Mar. 19		May 25	June 5	May 30	June 15	Sept. 15	Oct. 4
Boal de Madere:															
Own roots	Gi	1904			s			do	Mar. 26	May 24	June 1	May 29	June 7	Aug. 27	Sept. 23
Dog Ridge	O	1904	1907	89	s	3	2 to 4	Mar. 22		do	June 2	May 30	June 16	Sept. 28	Oct. 6
Lenoir	O	1903	1905	95	s	4.9	3 to 4	Mar. 19		May 26	June 1	do	June 15	Sept. 15	Sept. 24
Rupestris St. George	O	1903	1905	95	c, s	5.1	2 to 4	do		May 21	May 30	May 26	June 13	Sept. 24	Oct. 6
Taylor Narbonne	O	1904	1906	92	s	4.1	2 to 4	Mar. 20		May 25	June 1	May 30	do	Sept. 25	Oct. 10
Boglich:															
Own roots	Gi				s			Mar. 14	Mar. 28	May 26	May 30	May 31	June 1		
Bolynino:															
Own roots	Gi	1904			s			do	Apr. 1	May 20	June 6	May 30	June 13	Sept. 18	Sept. 24
Dog Ridge	O	1904	1906	88	c, s	3.9	2 to 6	Mar. 20		May 25	June 5	do	June 20	Sept. 26	
Lenoir	O	1903	1905	91	s	3.4	3 to 5	Mar. 17		May 20	June 3	May 24	June 17	Sept. 28	Oct. 1
Rupestris St. George	O	1903	1905	90	s	4.5	2 to 4	Mar. 19		May 22	June 8	May 27	June 20	Sept. 24	Oct. 8
Taylor Narbonne	O	1904	1906	88	c, s	4.6	2 to 4	Mar. 20		May 23	June 5	May 28	do	Sept. 25	Do.
Bonarda:															
Own roots	Gi	1904			s			Mar. 11	Apr. 2	June 3		June 9		Sept. 5	Sept. 23
Boudales:															
Own roots	Gi	1907			s			Mar. 28	Apr. 1	May 27				Sept. 20	
Lenoir	O	1903	1905	93	s	3.8		Mar. 20		May 24	June 6	May 30	June 17	Sept. 27	Oct. 15
Rupestris St. George	O	1903	1905	93	s	4.3	2 to 4	Mar. 22		May 25	June 5	June 2	do	do	Oct. 8
Bowood Muscat:															
Own roots	Gi	1904			s			Mar. 25	Apr. 5	June 5	June 6	June 14		Sept. 19	Sept. 24

Brustiano:															
Adobe Giant	F	1907	1907	81	c, s	3.5	....	Mar. 20	Mar. 30	May 15	May 23	May 29	....	....	
Lenoir	O	1904	1907	87	s	3.2	2 to 5	...do....	....	May 23	May 31	May 28	June 4	Aug. 27	
Monticola × Rupestris	F	1907	1907	83	c, s	3.3	3 to 5	Mar. 18	Mar. 28	May 15	May 23	May 24	....	Sept. 21	
Mourvedre × Rupestris, No. 1202	F	1907	1907	90	c, s	5	2 to 5	Mar. 11	...do....	May 14	May 28	May 28	....	...do....	Oct. 17
Buccleuch:															
Lenoir	O	1904	1907	81	s	2.6	3 to 5	Mar. 18	....	May 25	June 7	May 30	June 22	Sept. 25	Oct. 2
Rupestris St. George	F	1907	1907	91	c, s	2.8	3 to 4	Mar. 19	Mar. 28	May 20	May 26	June 2	....	....	
Buckland:															
Own roots	Gi	1905	....	......	s	....	....	Mar. 15	Apr. 3	May 25	....	....	....	....	
Lenoir	O	1903	1905	83	s	2.2	3 to 4	Mar. 22	....	May 23	June 5	May 27	June 14	Sept. 22	
Burger:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 15	Mar. 28	May 21	June 1	May 26	June 6	Aug. 29	Oct. 25
(Aestivalis × Monticola) × (Riparia × Rupestris No. 554-5)	O	1907	1909	78	s	2	2 to 4	....	....	....	....	....	....	....	
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	89	s	2.7	2 to 6	Mar. 20	....	May 23	June 10	May 28	June 16	Sept. 30	Oct. 11
Aramon × Rupestris Ganzin, No. 2	O	1907	1909	79	s	.8	3 to 5	Mar. 21	....	June 1	June 5	June 6	June 17	Oct. 1	
Berlandieri × Riparia, No. 420A	O	1907	1909	90	s	1.5	2 to 3	Mar. 24	....	June 2	June 3	...do....	June 20	Oct. 10	Oct. 15
Constantia	O	1907	1909	86	s	1.9	2 to 4	....	....	....	....	....	....	....	
Columbaud × Rupestris No. 2502	O	1907	1909	90	s	.8	2 to 4	Mar. 19	....	May 30	June 1	June 6	June 15	Oct. 10	Oct. 15
Dog Ridge	O	1903	1905	89	s	2	2 to 6	Mar. 17	....	May 22	June 5	May 27	June 21	Sept. 28	Oct. 20
Herbemont	O	1903	1905	80	s	1.4	3 to 5	Mar. 23	....	May 23	June 8	May 29	June 23	Sept. 30	Oct. 13
Lenoir	O	1903	1905	78	s	1.5	2 to 5	Mar. 19	....	May 24	June 5	...do....	June 17	Sept. 27	Oct. 12
Monticola × Riparia, No. 18808	O	1907	1909	95	s	1.2	....	Mar. 21	....	May 28	May 31	June 5	June 15	Oct. 10	
Mourvedre × Rupestris, No. 1202	O	1904	1906	89	s	2.4	3 to 4	Mar. 20	....	May 25	June 5	May 30	June 23	Sept. 29	Oct. 11
Riparia × Rupestris, No. 101	O	1904	1906	82	s	1.2	2 to 5	...do....	....	May 21	June 6	May 26	June 25	Sept. 28	Oct. 20
Riparia × Rupestris, No. 101-14	O	1907	1909	80	s	1	3 to 4	Mar. 19	....	June 1	June 5	June 4	June 19	Oct. 5	
Riparia × Rupestris, No. 3306	O	1907	1909	89	s	1.4	3 to 4	Mar. 21	....	June 2	June 8	June 6	June 23	Oct. 10	Oct. 11
Riparia × Rupestris, No. 3309	O	1904	1906	60	s	.6	3 to 6	Mar. 20	....	May 23	...do....	May 29	June 27	Sept. 27	Oct. 6
Rupestris Martin	O	1903	1905	85	s	2.1	3 to 6	Mar. 18	....	May 22	...do....	...do....	June 20	Sept. 30	Oct. 10
Rupestris Metallica	O	1907	1909	68	s	.3	....	...do....	....	May 31	...do....	June 4	June 25	....	
Rupestris Mission	O	1907	1909	62	s	.4	....	Mar. 19	....	June 2	....	June 6	....	....	
Rupestris St. George	O	1903	1905	87	s	1.4	2 to 5	Mar. 16	....	May 22	May 31	May 27	June 10	Sept. 28	Oct. 10
Salt Creek	O	1903	1905	87	s	2	2 to 5	Mar. 17	....	May 23	June 3	May 28	June 20	...do....	Oct. 11
Solonis Robusta	O	1907	1909	74	s	.7	3 to 5	Mar. 21	....	June 1	June 10	June 6	June 24	Oct. 10	Do.
Solonis × Othello, No. 1613	O	1907	1909	89	s	1	2 to 5	Mar. 18	....	June 3	June 5	...do....	June 18	...do....	Do.
Solonis × Riparia, No. 1616	O	1904	1906	65	s	.7	3 to 5	Mar. 19	....	May 21	June 8	May 26	June 23	Sept. 27	Oct. 10
Taylor Narbonne	O	1904	1906	86	s	2.5	3 to 5	Mar. 17	....	May 22	June 5	May 29	June 18	Oct. 4	Oct. 15
Cabernet Sauvignon:															
Own roots	Gi	....	....	......	s	....	....	Mar. 20	Apr. 3	May 27	....	....	....	Sept. 23	
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	92	c, s	4.3	2 to 5	...do....	....	May 24	June 5	May 29	June 22	Sept. 25	Oct. 5
Dog Ridge	O	1903	1905	97	c, s	4.7	2 to 4	Mar. 25	....	May 23	...do....	...do....	June 20	Sept. 23	Oct. 10
Herbemont	O	1903	1905	93	c, s	4.3	2 to 4	Mar. 24	....	...do....	June 8	May 28	June 21	Sept. 24	Oct. 11
Lenoir	O	1903	1905	92	c, s	4	2 to 4	Mar. 26	....	May 20	June 7	May 26	June 20	Sept. 15	Oct. 5
Mourvedre × Rupestris, No. 1202	O	1904	1906	91	s	3.2	2 to 4	Mar. 20	....	May 24	June 10	May 29	June 27	Sept. 25	Oct. 6
Riparia × Rupestris, No. 101	O	1904	1906	88	c, s	3.2	2 to 4	Mar. 21	....	May 22	June 8	May 27	June 24	...do....	Do.
Riparia × Rupestris, No. 3309	O	1904	1906	85	c, s	3.1	2 to 4	Mar. 20	....	May 26	...do....	June 2	June 22	...do....	Do.
Rupestris Martin	O	1903	1905	95	c, s	5.3	2 to 5	...do....	....	May 22	June 5	May 25	...do....	...do....	Oct. 11
Rupestris St. George	O	1903	1905	91	c, s	4.2	2 to 4	Mar. 24	....	May 20	June 2	May 26	June 20	Sept. 24	Sept. 30
Salt Creek	O	1903	1905	92	c, s	4.1	2 to 4	Mar. 25	....	May 23	June 4	May 28	June 17	...do....	Oct. 11
Solonis × Riparia, No. 1616	O	1904	1906	84	c, s	1.6	2 to 4	Mar. 20	....	May 24	June 2	June 2	June 19	Sept. 25	Do.
Taylor Narbonne	O	1904	1906	88	c, s	4.5	2 to 5	Mar. 24	....	May 26	June 18	...do....	June 23	Sept. 22	Oct. 10

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Calabrian:				*P. ct.*		*Lbs.*									
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 26	Mar. 29	May 31	June 4	June 9	....	Aug. 28	Sept. 15
Australis	F	1907	1907	88	c, s	4.5	3 to 5	Mar. 23	Apr. 3	May 16	May 23	May 31	....	Aug. 25	Sept. 5
Lenoir	F	1903	1905	86	s	1.2	4 to 6	Mar. 14	Apr. 1	May 18	May 20	May 22	June 3	Aug. 24	Sept. 19
Do	O	1904	1907	89	s	3.4	3 to 6	Mar. 21	....	May 23	June 5	May 27	June 19	Sept. 28	Oct. 5
Monticola × Rupestris	F	1907	1907	91	c, s	3	3 to 5	Mar. 25	Apr. 1	May 14	May 23	May 28	....	Sept. 25	
Riparia Gloire	F	1903	1905	89	c, s	4.3	2 to 6	Mar. 12	Mar. 30	May 20	May 20	May 24	June 2	Aug. 23	Sept. 16
Rupestris des Caussetties	F	1907	1907	85	c, s	3	3 to 4	Mar. 24	Apr. 3	May 16	May 24	June 1	....	....	
Rupestris St. George	F	1903	1905	94	s	4.2	3 to 6	Mar. 14	Mar. 31	May 12	May 16	May 21	May 27	Aug. 23	Sept. 19
Calmette:															
Adobe Giant	F	1907	1907	82	s	2	2 to 4	Mar. 17	Apr. 5	May 18	May 22	June 2	....	Sept. 6	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1907	1907	85	s	2.7	3 to 5	Mar. 18	...do....	May 17	...do....	June 5	....	Sept. 8	Sept. 15
Do	O	1904	1907	92	c, s	4.9	2 to 5	Mar. 20	....	May 23	June 8	May 28	June 20	Sept. 26	Oct. 11
Berlandieri × Riparia, No. 420B	F	1907	1907	81	s	1.5	3 to 5	Mar. 24	Apr. 5	May 15	May 21	May 31	June 2	Sept. 10	Oct. 17
Constantia	F	1907	1907	96	c, s	5.8	2 to 5	Mar. 23	Apr. 2	...do....	May 23	May 30	....	....	
Herbemont	O	1904	1909	89	s	2.6	3 to 4	Mar. 20	....	June 1	June 8	June 8	June 20	Oct. 17	
Lenoir	O	1906	1907	82	s	2	2 to 4	Mar. 19	....	May 12	...do....	May 18	June 22	Sept. 28	Oct. 8
Monticola × Riparia, No. 18804	F	1907	1907	85	c, s	2	3 to 5	Mar. 20	Apr. 2	May 10	May 22	May 29	May 30	Oct. 17	
Monticola × Riparia, No. 18815	F	1907	1907	88	c, s	2.3	2 to 4	...do....	Apr. 5	May 15	May 23	May 30	June 3	Sept. 10	Oct. 17
Monticola × Rupestris	F	1907	1907	84	s	1.2	3 to 4	Mar. 24	....	May 25	....	....	....	Sept. 5	Sept. 21
Ponroy	F	1907	1907	85	c, s	1.5	2 to 4	Mar. 21	Apr. 5	May 16	May 22	May 29	....	....	
Ramsey	F	1907	1907	81	s	2.5	3 to 5	...do....	...do....	...do....	May 23	June 4	June 5	Sept. 14	Sept. 21
Riparia × Rupestris, No. 101	F	1907	1907	90	c, s	2.2	3 to 5	Mar. 18	...do....	May 12	May 22	May 31	....	Sept. 21	
Do	O	1904	1907	55	s	2.3	2 to 6	Mar. 20	....	May 21	June 25	May 26	June 30	Sept. 26	Oct. 16
Riparia × Rupestris, No. 3309	F	1907	1907	87	c, s	3.1	2 to 5	...do....	Apr. 5	May 15	May 21	May 29	....	Sept. 19	
Do	O	1904	1907	58	s	2.8	2 to 5	Mar. 25	....	May 27	June 4	June 3	June 19	Sept. 26	Oct. 11
Riparia × Rupestris de Jaeger	F	1907	1907	80	c, s	1.4	3 to 5	Mar. 21	Apr. 6	May 16	May 22	...do....	June 4	Sept. 14	Sept. 20
Rupestris × Berlandieri, No. 219A	F	1907	1907	85	s	.7	2 to 5	Mar. 20	...do....	May 14	May 24	May 30	June 2	...do....	Sept. 21
Rupestris × Berlandieri, No. 301-37-152	F	1907	1907	82	s	2.2	....	Mar. 25	Apr. 1	May 17	May 21	May 29	....	....	
Salt Creek	F	1907	1907	83	s	2.5	....	Mar. 22	Apr. 2	...do....	....	June 2	....	....	
Solonis Robusta	F	1907	1907	76	s	1.5	3 to 5	Mar. 25	Apr. 3	May 23	June 20	June 1	....	Sept. 21	

Solonis × Othello	F	1907	1907	85	c, s	2.3	2 to 5	Mar. 21	Apr. 5	May 15	May 23	May 29	June 3	Sept. 8	Sept. 21
Solonis × Riparia, No. 1616	F	1907	1907	88	s	4	....	Mar. 27	....	Mar. 23	....	....	....	Sept. 20	Oct. 17
Do	O	1904	1907	56	s	1.2	2 to 5	Mar. 25	....	May 22	June 4	May 28	June 20	Sept. 28	Oct. 9
Taylor Narbonne	F	1907	1907	86	s	1.7	2 to 4	...do....	Apr. 6	May 16	May 22	June 2	....	....	
Vermorel	F	1907	1907	85	s	4	2 to 4	...do....	Apr. 1	...do....	...do....	May 29	....	Oct. 17	
Carignane:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 18	Mar. 27	May 27	June 3	May 30	June 10	Sept. 20	Sept. 26
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	92	s	3	2 to 5	Mar. 19	....	May 26	June 5	June 1	June 21	Sept. 28	Oct. 20
Dog Ridge	O	1903	1905	95	s	3.3	2 to 5	Mar. 23	....	May 25	June 7	...do....	June 23	...do....	Oct. 10
Herbemont	O	1903	1905	92	s	3.9	1 to 6	...do....	....	May 24	June 5	May 30	June 19	Sept. 24	Oct. 11
Lenoir	O	1903	1905	93	s	4.5	3 to 6	Mar. 26	....	May 25	June 7	...do....	June 21	Sept. 28	Oct. 12
Mourvedre × Rupestris, No. 1202	O	1904	1906	92	s	2.9	3 to 6	....	....	May 24	June 13	...do....	June 29	...do....	Oct. 11
Riparia × Rupestris, No. 101	O	1904	1906	92	s	2.2	3 to 6	Feb. 19	....	...do....	June 3	May 29	June 24	Sept. 25	Oct. 10
Riparia × Rupestris, No. 3309	O	1904	1906	92	s	2.8	2 to 5	Mar. 17	....	May 24	June 3	May 29	June 24	Sept. 27	Oct. 6
Rupestris Martin	O	1903	1905	90	c, s	4	3 to 6	Mar. 22	....	...do....	June 5	...do....	June 20	...do....	Oct. 7
Rupestris St. George	O	1903	1905	85	s	4.2	2 to 6	...do....	....	May 23	June 8	May 28	June 21	...do....	Oct. 8
Salt Creek	O	1903	1905	95	c, s	2	3 to 6	Mar. 23	....	May 24	June 12	May 30	June 26	...do....	Oct. 10
Solonis × Riparia, No. 1616	O	1904	1906	90	s	2.1	3 to 6	Mar. 17	....	May 23	June 10	May 28	June 24	...do....	Oct. 11
Taylor Narbonne	O	1904	1906	90	c, s	3	3 to 6	Mar. 20	....	May 26	June 5	June 1	June 20	Sept. 29	Oct. 10
Castiza:															
Riparia × Rupestris, No. 3309	O	....	1910	90	s	2.1	....	....	....	June 3	June 15	June 7	June 29	....	
Catarratto a la Porta:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 25	Mar. 30	May 28	June 10	June 2	June 15	Sept. 15	Sept. 20
Chaouch:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 13	Mar. 25	May 29	June 3	June 10	....	Aug. 25	Do.
Lenoir	O	....	1910	91	s	4.5	2 to 3	Mar. 15	....	May 18	June 9	May 23	June 13	Sept. 24	
Chaouch Rose:															
Lenoir	O	1904	1907	97	c, s	4.3	3 to 5	Mar. 18	....	...do....	June 1	May 22	June 20	Sept. 29	
Charbono:															
Own roots	Gi	1907	....	......	s	....	....	...do....	Apr. 5	May 27	....	....	....	Sept. 25	
Dog Ridge	O	1904	1906	92	c, s	5.5	2 to 4	....	....	May 24	....	May 29	....	Oct. 3	
Lenoir	O	1903	1905	93	c, s	3.9	2 to 5	....	....	May 21	....	May 26	....	Sept. 28	
Rupestris St. George	O	1903	1905	91	c, s	4	2 to 5	....	....	May 25	....	May 30	....	Sept. 27	Sept. 30
Riparia × Rupestris, No. 101	O	1904	1906	90	s	2.5	3 to 5	Mar. 18	....	May 24	June 8	...do....	June 20	Sept. 28	Oct. 6
Riparia × Rupestris, No. 3309	O	1904	1906	90	s	2.7	2 to 5	Mar. 20	....	May 26	...do....	June 2	June 21	Sept. 27	Do.
Solonis × Riparia, No. 1616	O	1904	1906	84	s	2	2 to 5	...do....	....	May 23	June 5	May 27	June 20	Sept. 24	Oct. 11
Taylor Narbonne	O	1904	1906	87	s	2.3	2 to 5	Mar. 17	....	May 24	...do....	May 29	...do....	Sept. 26	Oct. 10
Chasselas Bouches du Rhone:															
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 18	Apr. 1	May 28	....	....	....	Sept. 5	Sept. 25
Dog Ridge	O	1904	1906	91	s	3.5	3 to 5	Mar. 15	....	May 24	June 1	May 29	June 16	Sept. 9	Oct. 10
Lenoir	O	1903	1905	90	c, s	3.3	2 to 5	Mar. 13	....	May 20	...do....	May 24	June 15	...do....	Oct. 9
Rupestris St. George	O	1903	1905	93	s	5.2	3 to 4	Mar. 17	....	May 21	June 5	May 26	June 21	...do....	Oct. 10
Taylor Narbonne	O	1904	1906	70	s	.5	3 to 5	Mar. 18	....	May 20	June 2	May 25	June 10	...do....	Sept. 21
Chasselas Bulhery:															
Dog Ridge	O	1904	1906	92	s	4	3 to 5	Mar. 15	....	May 23	June 1	May 29	June 13	Sept. 21	Oct. 10
Lenoir	O	1903	1905	87	s	4.2	2 to 5	...do....	....	May 20	June 8	May 23	June 21	Sept. 23	Sept. 25
Rupestris St. George	O	1903	1905	94	s	4.4	2 to 5	Mar. 14	....	May 24	June 1	May 30	June 13	Sept. 9	Sept. 20
Taylor Narbonne	O	1904	1906	75	s	1.6	3 to 5	Mar. 18	....	...do....	...do....	May 29	June 9	Sept. 23	Oct. 1

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Chasselas Cioutat:				P. ct.		Lbs.									
Own roots	Gi	1907			s			Mar. 17	Apr. 10	May 28					
Dog Ridge	O	1904	1906	91	s	3.3	2 to 5	...do....		May 21	June 2	May 26	June 15	Sept. 9	Oct. 10
Lenoir	O	1903	1905	87	s	2.9	2 to 5	...do....		...do....	June 3	May 21	June 14	...do....	Oct. 1
Rupestris St. George	O	1903	1905	88	s	3.9	2 to 5	...do....		...do....	June 1	May 25	June 20	...do....	Oct. 2
Chasselas Doré:															
Own roots	Gi	1905			c, s			Mar. 20	Mar. 26	May 29	June 2	June 7		Aug. 24	Sept. 21
Dog Ridge	O	1904	1906	91	s	2.8	3 to 5	Mar. 14		May 25	May 31	May 30	June 12	Sept. 9	Oct. 10
Lenoir	O	1903	1905	94	c, s	3.5	3 to 5	...do....		May 21	June 1	May 24	June 20	...do....	Oct. 9
Rupestris St. George	O	1903	1905	94	s	6.1	2 to 5	Mar. 15		May 23	June 3	May 29	...do....	...do....	Oct. 2
Chasselas Duhamel:															
Aramon × Rupestris Ganzin, No. 1	O	1904		92	c, s	5	2 to 4	Mar. 21		May 31	June 1	June 2	June 13	Sept. 29	Oct. 8
Dog Ridge	O	1904	1906	91	s	4	3 to 4	Mar. 15		May 21	June 3	May 26	June 19	Sept. 9	Oct. 10
Lenoir	O	1903	1905	90	s	3.1	3 to 5	...do....		May 20	...do....	May 28	June 14	...do....	Sept. 30
Rupestris St. George	O	1903	1905	94	s	4.1	2 to 5	Mar. 21		May 21	June 8	May 26	June 24	...do....	Oct. 2
Taylor Narbonne	O	1904	1906		s	2.5								...do....	
Chasselas de Fontainebleau:															
Rupestris St. George	F	1903	1905	85	s	1.5	2 to 6	Mar. 14	Mar. 30	May 15	May 17	May 20	May 24	Aug. 19	Sept. 19
Chasselas Florence:															
Own roots	Gi	1905			s			Mar. 8	Apr. 21	May 27	June 1	June 7		Sept. 23	
Dog Ridge	O	1904	1906	91	s	4.7	2 to 5	Mar. 15		May 24	...do....	May 30	June 12	Sept. 9	Oct. 10
Lenoir	O	1903	1905	91	s	3.1	3 to 5	Mar. 16		May 22	May 31	May 27	June 15	...do....	Oct. 9
Rupestris St. George	O	1903	1905	91	s	3.9	2 to 4	Mar. 17		May 25	June 1	June 1	June 18	...do....	Do.
Taylor Narbonne	O	1904	1906	82	s	1	2 to 3	Mar. 16		May 22	...do....	May 27	June 12	Sept. 21	
Chasselas Montauban:															
Own roots	Gi	1905			c, s			Mar. 18	Apr. 1	...do....	May 27	May 26			
Lenoir	O	1903	1905	95	s	2.5	2 to 6	Mar. 16		May 23	June 3	May 28	June 17	Sept. 9	Sept. 25
Rupestris St. George	O	1903	1907	91	s	4.7	2 to 5	Mar. 24		May 21	June 5	May 26	June 29	...do....	Oct. 12
Chasselas Musque Vrai:															
Own roots	Gi	1907			s			Mar. 15	Mar. 20	May 25				Sept. 25	
Dog Ridge	O	1904	1906	91	s	3.2	2 to 5	Mar. 16		May 22	June 1	May 27	June 20	Sept. 9	Oct. 10
Lenoir	O	1903	1905	88	s	3.9	2 to 5	Mar. 20		May 20	...do....	May 24	June 18	...do....	Oct. 9
Rupestris St. George	O	1903	1905	94	s	6.2	1 to 4	Mar. 17		May 23	...do....	May 28	June 15	...do....	Oct. 10

Chasselas Negrepont:															
Own roots	Gi	1905	....	......	s	....	....	Mar. 6	Apr. 8	May 22	...do....	May 27	June 6	Sept. 21	
Dog Ridge	O	1904	1906	85	s	3.6	2 to 5	Mar. 17	....	May 24	June 3	May 29	June 19	Sept. 9	Oct. 1
Lenoir	O	1903	1905	90	s	3.6	2 to 5	Mar. 20	....	May 19	June 1	May 24	June 16	...do....	Oct. 9
Riparia Gloire	O	1904	....	63	s	4	....	Mar. 16	....	...do....	...do....	May 14	June 12	....	
Rupestris St. George	F	1903	1905	85	s	1.5	2 to 6	Mar. 13	Mar. 30	May 15	May 19	May 23	June 1	Aug. 5	Sept. 4
Do	O	1903	1905	88	s	4.6	2 to 5	Mar. 16	....	May 22	June 1	May 27	June 18	Sept. 9	Oct. 10
Taylor Narbonne	O	1904	1906	87	s	2.3	2 to 4	...do....	....	May 21	June 2	May 26	June 11	...do....	Do.
Chasselas Rose:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 18	Apr. 3	May 28	May 30	June 7	....	Sept. 5	Sept. 24
Chasselas Rose de Falloux:															
Own roots	Gi	1905	....	......	s	....	....	Mar. 6	Apr. 1	...do....	...do....	June 6	....	...do....	Sept. 28
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	90	s	3.1	2 to 6	Mar. 18	....	May 21	June 5	May 27	June 17	Sept. 9	Oct. 11
Do	F	1907	1907	79	s	1.5	2 to 7	Mar. 20	Apr. 1	May 15	May 22	May 30	....	Aug. 25	Sept. 12
Australis	F	1907	1907	79	s	2.2	3 to 6	Mar. 18	....	May 22	....	....	....	...do....	Sept. 26
Dog Ridge	O	1904	1906	88	s	2.7	3 to 5	...do....	....	May 26	June 2	June 1	June 18	Sept. 9	Oct. 11
Lenoir	O	1903	1905	89	s	3.2	2 to 6	Mar. 17	....	...do....	...do....	...do....	June 16	...do....	Sept. 26
Mourvedre × Rupestris, No. 1202	O	1904	1906	90	s	4.8	2 to 6	Mar. 20	....	...do....	June 5	...do....	June 24	Sept. 23	Oct. 13
Riparia × Rupestris, No. 101	F	1907	1907	80	s	2.5	2 to 5	Mar. 28	....	May 21	....	....	....	Sept. 21	
Do	O	1904	1906	88	s	2.7	3 to 6	Mar. 22	....	May 23	June 9	May 28	June 24	Sept. 9	Sept. 25
Riparia × Rupestris, No. 3309	F	1907	1907	75	s	....	....	Mar. 20	Apr. 1	May 13	....	May 26	....	....	
Do	O	1904	1906	88	s	1.8	3 to 6	Mar. 19	....	May 24	June 1	May 29	June 20	Sept. 9	Oct. 12
Rupestris St. George	F	1903	1905	86	s	2.2	3 to 6	Mar. 12	Apr. 1	May 16	May 22	May 24	June 5	Aug. 10	Sept. 4
Do	O	1903	1905	92	s	5.4	2 to 6	Mar. 18	....	May 23	June 8	May 28	June 14	Sept. 9	Oct. 12
Salt Creek	F	1907	1907	86	c, s	5	3 to 7	Mar. 23	Mar. 30	May 14	May 23	May 27	....	....	
Solonis × Riparia, No. 1616	O	1904	1906	82	s	1.5	3 to 4	....	....	May 20	June 8	May 25	June 20	Sept. 9	Oct. 12
Taylor Narbonne	F	1907	1907	75	s	.7	4 to 7	Mar. 22	....	...do....	....	....	....	Sept. 21	
Do	O	1904	1906	80	s	2.9	2 to 5	Mar. 17	....	May 21	June 1	May 26	June 20	Sept. 9	Oct. 10
Chasselas Rose Royal:															
Aramon × Rupestris Ganzin, No. 1	O	1904	....	92	c, s	4.5	2 to 4	Mar. 18	....	May 31	...do....	June 5	June 13	Sept. 25	Sept. 26
Dog Ridge	O	1904	1906	81	s	2	3 to 5	Mar. 16	....	May 26	June 2	June 2	...do....	Sept. 9	Sept. 21
Lenoir	O	1903	1905	89	c, s	4	3 to 5	Mar. 14	....	May 22	June 7	May 26	June 16	...do....	Oct. 2
Rupestris St. George	O	1903	1905	92	s	4.7	2 to 4	Mar. 15	....	...do....	June 8	May 27	June 23	...do....	Sept. 20
Taylor Narbonne	O	1904	1906	50	s	.7	3 to 4	Mar. 20	....	May 20	June 9	May 26	June 14	...do....	Sept. 23
Chasselas Rouge:															
Own roots	Gi	1905	....	......	s	....	....	Mar. 8	Apr. 1	...do....	....	May 30	....	Sept. 5	Sept. 25
Lenoir	O	1903	1905	90	s	4.1	2 to 6	Mar. 19	....	...do....	June 5	May 24	June 19	Sept. 9	Oct. 1
Rupestris St. George	O	1903	1905	88	s	4	2 to 4	Mar. 24	....	May 22	June 4	May 27	June 21	...do....	Oct. 10
Chasselas St. Bernard:															
Canada	F	1909	1909	76	s	1.5	....	Mar. 13	Apr. 1	May 12	May 20	May 25	....	....	
Lenoir	O	1904	1907	79	s	2.1	2 to 5	Mar. 20	....	May 16	June 3	May 24	June 18	Sept. 30	
Riparia × Rupestris, No. 101	F	1907	1907	73	s	1	....	Mar. 18	Mar. 28	May 12	....	May 26	....	....	
Rupestris des Caussettes	F	1907	1907	80	s	1.5	....	Mar. 13	Apr. 1	May 1	May 18	May 24	....	....	
Rupestris St. George	F	1907	1907	78	s	1.7	....	Mar. 12	Mar. 30	May 15	....	....	....	....	
Valencia	F	1907	1907	82	s	1.5	....	Mar. 21	Apr. 1	May 11	....	May 24	....	....	
Chauche Noir:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 11	Mar. 26	May 29	May 30	June 5	....	Aug. 25	Sept. 20
Dog Ridge	O	1904	1906	95	c, s	5.2	2 to 4	Mar. 18	....	May 23	June 5	May 29	June 17	Sept. 20	Oct. 1
Lenoir	O	1903	1905	94	c, s	3.6	2 to 4	Mar. 15	....	May 21	June 1	May 26	June 14	Sept. 16	Sept. 25
Rupestris St. George	O	1903	1905	93	c, s	7.2	2 to 4	Mar. 20	....	May 23	June 5	May 29	June 17	Sept. 15	Do.
Chaweesh:															
Lenoir	O	1906	1909	88	s	.5	....	Mar. 17	....	June 5	June 13	June 21	....	....	

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Chenin Blanc:				*P. ct.*		*Lbs.*									
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 15	Mar. 28	May 26	May 30	May 30	June 5	Aug. 28	Sept. 25
Dog Ridge	O	1904	1906	91	c, s	3.6	2 to 4	Mar. 20	....	May 24	June 1	May 29	June 15	Sept. 23	Oct. 17
Lenoir	O	1903	1905	93	s	5.8	2 to 5	Mar. 18	....	May 21	...do....	May 24	June 20	Sept. 15	Sept. 28
Rupestris St. George	O	1903	1906	90	s	5.6	2 to 4	Mar. 19	....	May 21	...do....	May 29	June 17	Sept. 20	Oct. 1
Child of Hall:															
Lenoir	O	1904	1907	89	s	3.2	3 to 5	Mar. 18	....	May 23	...do....	May 28	June 16	Sept. 28	Oct. 6
Cinsaut:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 21	Mar. 29	May 26	June 4	May 30	June 9	Aug. 28	Sept. 20
Lenoir	O	1903	1905	84	s	2.2	2 to 5	Mar. 17	....	May 24	June 1	June 2	June 10	Sept. 28	Oct. 4
Rupestris St. George	O	1903	1905	93	s	3.9	2 to 4	Mar. 20	....	...do....	June 5	May 29	June 17	Sept. 26	Sept. 30
Cipro Nero:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 27	Apr. 1	June 4	...do....	June 9	....	Sept. 24	
Clairette à Gros Grain:															
Lenoir	O	1904	1907	88	s	3	2 to 5	Mar. 16	....	May 25	...do....	May 29	June 20	Sept. 30	Oct. 8
Monticola × Rupestris	F	1907	1907	82	c, s	2.3	3 to 6	Mar. 14	Mar. 30	May 14	May 22	May 30	....	Sept. 21	
Clairette Blanche:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 20	Apr. 1	May 27	June 4	May 31	June 9	Sept. 20	Sept. 28
Clairette Mazel:															
Own roots	Gi	1905	....	......	c, s	....	....	...do....	....	May 29	June 2	June 2	June 7	Aug. 28	Sept. 20
Lenoir	O	1906	1912	85	c, s	4	3 to 4	Mar. 22	....	May 30	May 31	June 4	...do....	Sept. 5	Oct. 7
Riparia Gloire	O	1904	....	89	s	4	....	Mar. 19	....	June 1	June 8	June 6	June 23	Sept. 22	Do.
Coarna Neagra:															
Australis	F	1907	1907	88	s	4.8	....	Mar. 20	....	May 25	....	....	....	....	
Lenoir	O	1904	1907	84	s	2.8	2 to 4	Mar. 19	....	May 24	May 31	May 30	June 13	Sept. 30	Oct. 3
Rupestris Martin	F	1907	1907	90	c, s	5.7	2 to 5	Mar. 23	....	May 27	....	....	....	....	
Colutun Cucco Bitundo:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 21	Mar. 30	May 24	June 6	May 29	June 12	Aug. 29	Sept. 26
Commandeur:															
Riparia × Rupestris, No. 3306	O	1904	....	85	s	6.5	2 to 3	Mar. 20	....	May 12	June 1	May 17	June 15	Sept. 25	Oct. 1

Corbeau Noir Shar:														
Own roots	Gi	1904			s			Mar. 18	Mar. 30	May 26	June 3	June 9		Sept. 17	Sept. 25
Corinthe Blanc:														
Lenoir	O	1906	1909	91	c, s	.5		Mar. 17		May 30	June 8	June 8	June 25		
Corinthe à Gros Grain:														
Canada	F	1907	1907	96	c, s	5	3 to 5	Mar. 25	Apr. 3	May 18	May 23	May 30		Sept. 25	
Lenoir	O	1904	1907	90	s	2.2	3 to 6	Mar. 19		May 23	June 9	May 29	June 24	Sept. 23	Oct. 26
Mourvedre × Rupestris, No. 1202	F	1907	1909	92	c, s	3.3		Mar. 24	Apr. 3	May 22	May 25	June 2		Aug. 25	Sept. 25
Ramsey	F	1907	1907	89	c, s	4	3 to 4	Mar. 20	Apr. 2	May 21	May 29	June 1		Sept. 21	
Riparia × Rupestris, No. 3309	F	1907	1907	92	s	4	3 to 4	Mar. 24	Apr. 1	May 18	May 25	June 4		Aug. 25	Sept. 21
Rupestris St. George	F	1907	1907	93	c, s	4.8	3 to 5	Mar. 25	Apr. 3	May 20	do.	May 30		Sept. 7	Sept. 25
Solonis × Riparia, No. 1616	F	1907	1907	95	c, s	6.1	3 to 5	Mar. 17		May 23				Sept. 17	
Corinthe Rose:														
Adobe Giant	F	1907	1907	98	c, s	9.6	3 to 5	Mar. 20	Apr. 1	May 12	May 22	May 23			
Canada	F	1907	1908	100	c, s	5		do.		May 19	May 24	May 31		Sept. 21	
Constantia	F	1907	1907	96	c, s	7.7	1 to 6	Mar. 14	Apr. 28	May 16	May 22	May 25			
Lenoir	O	1904	1908	90	c, s	3.1	3 to 5	Mar. 22		May 25	June 6	May 29	June 25	Sept. 10	Sept. 15
Monticola × Rupestris	F	1907	1907	85	c, s	3.3		Mar. 23	Apr. 3	May 18	May 27	do.		Aug. 10	
Mourvedre × Rupestris, No. 1202	F	1907	1907	95	c, s	4.1		Mar. 21	do.	do.	May 25	do.		Aug. 15	
Riparia Grand Glabre	F	1907	1907	96	s	9.7	3 to 7	Mar. 15	Apr. 1	May 13	May 22	May 25			
Riparia × Rupestris, No. 101	F	1907	1907	97	c, s	9	3 to 7	Mar. 23	do.	May 14	do.	May 26			
Vermorel	F	1907	1907	93	c, s	7.1		Mar. 19	Mar. 28	May 18	do.	May 25			
Coristano:														
Australis	F	1907	1907	97	c, s	7.5	3 to 5	Mar. 23	Apr. 1	do.	May 24	June 1		Sept. 17	Oct. 17
Barnes	F	1907	1907	96	c, s	4.3	2 to 5	Mar. 25	do.	May 16	May 21	May 29			
Lenoir	O	1904	1907	83	s	2	2 to 6	Mar. 20		May 26	June 7	May 30	June 23	Sept. 30	Oct. 26
Monticola × Rupestris	F	1907	1907	96	c, s	6.3	2 to 6	Mar. 28	Apr. 1	May 19	May 25	June 4		Sept. 17	Oct. 17
Rupestris Martin	F	1907	1907	90	c, s	5.5	2 to 6	Mar. 24	Apr. 1	May 17	May 22	May 30		Sept. 17	Sept. 21
Rupestris St. George	F	1907	1907	96	c, s	7	2 to 5	Mar. 25	do.	May 20	May 23	June 3		Sept. 10	Do.
Cornichon:														
Own roots	Gi	1904			c, s			Mar. 17	Mar. 27	May 30	June 6	June 4	June 13	Sept. 19	Oct. [illegible]
Aramon × Rupestris Ganzin, No. 1	O	1904	1907	93	s	3.5	3 to 4	Mar. 24		May 22	June 10	May 28	June 27	Sept 27	
Lenoir	O	1906	1907	89	s	4.1	3 to 4	Mar. 22		May 23	June 6	do.	June 20	Oct. 13	
Riparia Gloire	O	1904		90	s	6		do.		May 17	June 8	May 23	June 25		
Rupestris × Berlandieri, No. 301A	F	1907	1907	90	c, s	4.5	3 to 4	Apr. 5		May 23				Sept. 26	
Solonis Robusta	F	1907	1907	92	c, s	4.7	3 to 5	Mar. 12	Apr. 6	May 18	May 24	May 29		Sept. 15	
Crabbs Burgundy:														
Own roots		1907			s			Mar. 18	Apr. 10	May 25				Sept. 23	
Aramon × Rupestis Ganzin, No. 1	O	1904	1906	87	s	3.8	2 to 4		Mar. 20	May 19	June 6	May 24	June 18	Sept. 28	Oct. 12
Dog Ridge	O	1904	1906	95	c, s	4	3 to 4	Mar. 17		May 26	June 2	June 1	June 21	do.	Oct. 8
Lenoir	O	1903	1905	91	s	3.9	2 to 5	Mar. 15		May 20	June 5	May 25	June 20	do.	Oct. 12
Riparia × Rupestris, No. 101	O	1904	1906	88	s	1.2	2 to 4	Mar. 22		May 21	June 4	May 27	June 17	Sept. 27	Oct. 11
Riparia × Rupestris, No. 3309	O	1904	1906	92	s	2.7	3 to 4	Mar. 20		May 20	June 1	May 25	do.	Sept. 28	Do.
Rupestris St. George	O	1903	1905	88	s	2.8	2 to 4	Mar. 16		May 23	do.	May 29	do.	Sept. 29	Oct. 8
Solonis × Riparia, No. 1616	O	1904	1906	79	s	1.1	3 to 5	Mar. 20		May 19	June 10	May 24	June 27	do.	Oct. 11
Taylor Narbonne	O	1904	1906	85	s	2.1	2 to 5	do.		May 21	May 31	May 26	June 12	Sept. 28	Oct. 10
Croetto:														
Own roots	Gi	1904			s			Mar. 19	Apr. 1	May 24	June 3	May 29	June 9	Aug. 29	Sept. 27
Crujidero:														
Own roots	Gi	1904			s			Mar. 17	Mar. 26	May 28	June 6	June 2	June 13	Sept. 22	Oct. 15

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Danugue:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904			s			Mar. 24	Mar. 28	June 2	June 4	June 7		Sept. 24	
Dog Ridge	O	1904	1907	86	s	2	2 to 5	Mar. 17		May 25	May 31	May 30	June 12	Sept. 9	Sept. 25
Lenoir	O	1903	1905	89	s	3.1	3 to 5	Mar. 15		May 20	June 1	May 26	June 14	...do...	Do.
Rupestris St. George	O	1903	1905	92	c, s	3.9	3 to 4	Mar. 20		May 23	June 2	May 29	June 7	...do...	Do.
Taylor Narbonne	O	1904	1906	84	s	1.8	2 to 4	...do...		May 19	June 9	May 24	June 15	...do...	
Dattier de Beyrouth:															
Lenoir	O	1903	1912	58	s	2.5		Mar. 16		June 4		June 9			
Deacon Superb:															
Own roots	Gi	1907			c, s			Mar. 10	Apr. 1	May 26				Sept. 19	
Diamant:															
Own roots	Gi	1905			s			Mar. 23	...do...					Sept. 25	
Dodrelabi:															
Own roots	Gi	1904			s			Mar. 18	Mar. 28	May 2	June 1	May 31	June 7	Sept. 20	Sept. 26
Aramon × Rupestris Ganzin, No. 1	O	1904	1909				3 to 4	Mar. 16		June 3	June 8	June 8	June 22		
Dog Ridge	O	1904	1907	94	s	3.5	3 to 4	Mar. 20		May 25	June 5	May 29	June 20	Oct. 10	Oct. 20
Herbemont	O	1904	1909	89	s	3.1	3 to 4	Mar. 18		June 3	June 8	June 9	June 25	Oct. 2	Oct. 15
Lenoir	O	1903	1905	90	s	2.7	2 to 4	Mar. 17		May 24	June 5	May 30	June 17	Sept. 10	Oct. 10
Mourvedre × Rupestris, No. 1202	O	1904	1909	95	s	3	3 to 4	Mar. 21		June 3	June 6	June 8	June 20	Oct. 5	Oct. 12
Rupestris St. George	O	1903	1905	89	s	3.3	2 to 4	Mar. 19		May 22	June 2	May 28	June 21	Sept. 28	Oct. 10
Solonis × Riparia, No. 1616	O	1904	1909	93	s	4.2	2 to 4	Mar. 23		May 25	June 4	June 8	June 15	Oct. 5	Oct. 12
Taylor Narbonne	O	1904	1906	87	s	2.2	3 to 4	Mar. 18		May 27	June 1	June 2	June 13	Sept. 30	Oct. 4
Drnekusa:															
Own roots	Gi	1904			s			Mar. 14	Mar. 24	May 28	June 5	...do...	June 10	Aug. 29	Sept. 25
Dronkane:															
Lenoir	O	1904	1907	88	s	3	3 to 5	Mar. 26		May 26	June 15	June 1	June 30	Sept. 25	Oct. 25
Rupestris des Caussettes	F	1907	1907	88	s	2	4 to 5	Mar. 21	Apr. 1	May 16	May 22	May 27		Oct. 17	
Duc de Magenta:															
Rupestris St. George	F	1903	1905	86	s	2.3	5 to 7	Mar. 9	Mar. 15	May 10	May 16	May 20	May 26	Aug. 5	Sept. 13
Duc de Malakoff:															
Own roots	Gi	1905			c, s			Mar. 18	Mar. 27	May 29	May 31	June 6		Aug. 28	Sept. 25

Emathia:															
Dog Ridge	O	1904	1908					Mar. 15		June 4	June 5	June 8	June 20		
Lenoir	O	1904	1908	90	s	1.5		do.		June 3		June 7	June 18	Sept. 20	Oct. 7
Emperor:															
Lenoir	O	1903	1909	96	s	2.5		Mar. 21		June 5	June 6	June 10	June 21		
Rupestris St. George	O	1903	1909	93	s	4.2		do.		May 31	June 1	June 6	June 14		
Erz Roumli:															
Lenoir	O	1906	1909	85	s	.8		Mar. 19		June 6	June 14	June 12			
Etraire de l'Adhui:															
Own roots	Gi	1904			s			Mar. 18	Mar. 22	May 29	May 30	June 7			
Fajoumi Jaune:															
Lenoir	O	1904	1907	90	s	3.1	3 to 6	Mar. 17		May 25	June 8	May 29	June 21	Sept. 30	Oct. 13
Rupestris St. George	F	1907	1907	92	c, s	6.5	2 to 4	Mar. 14	Mar. 30	May 14	May 21	May 25		Aug. 5	Sept. 21
Faphly:															
Lenoir	O	1904	1907	85	c, s	2.4	3 to 6	Mar. 18		May 24	June 8	May 29	June 20	Sept. 29	Oct. 15
Riparia × Rupestris, No. 3309	F	1909	1909	94	c, s	5.5		Mar. 13		May 22				Sept. 25	Oct. 17
Rupestris St. George	F	1907	1907	93	c, s	5.5		Mar. 12	Apr. 5	May 18	May 22	June 4		Sept. 16	Do.
Feher Goher Noir:															
Own roots	Gi	1904			s			Mar. 15	Mar. 24	May 22	May 30	May 27	June 5	Sept. 15	Sept. 25
Feher Som:															
Lenoir	O	1904	1907	89	s	2.6	2 to 4	Mar. 21		May 25	June 8	June 1	June 6	Sept. 26	Oct. 7
Rupestris St. George	F	1907	1907	85	s	3	2 to 4	Mar. 20	Mar. 28	May 16	May 23	May 30		Oct. 17	
Feher Szagos:															
Adobe Giant	F	1904	1906	87	s	1.7	2 to 4	Mar. 15	Mar. 30	do.	do.	May 27	May 31	Sept. 14	Sept. 20
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	96	c, s	6	2 to 5	Mar. 13	Mar. 25	do.	May 29	May 21	June 6	Sept. 15	Do.
Dog Ridge	F	1903	1905	91	c, s	2	2 to 4	Mar. 12	do.	May 20	May 20	May 25	June 1	Sept. 5	Do.
Herbemont	F	1903	1905	84	c, s	1.7	2 to 5	Mar. 8	Mar. 20	May 10	do.	do.	May 26	do.	Do.
Lenoir	F	1903	1905	85	s	1.4	2 to 5	Mar. 11	Mar. 30	May 14	May 16	May 21	May 27	Sept. 12	Sept. 15
Mourvedre × Rupestris, No. 1202	F	1904	1905	93	c, s	3.7	2 to 6	Mar. 6	Mar. 25	May 15	May 20	May 24	do.	Sept. 8	Sept. 20
Riparia Gloire	F	1903	1905	90	s	2.6	2 to 5	Mar. 14	Mar. 27	May 13	do.	May 22	May 26	Sept. 13	Sept. 19
Ripara × Rupestris, No. 101	F	1904	1906	88	s	3.3	3 to 6	do.	Mar. 28	May 16	May 21	May 21	May 29	Sept. 15	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	95	c, s	3.4	2 to 6	Mar. 8	Mar. 30	May 14	May 23	May 26	May 28	do.	Do.
Rupestris Martin	F	1903	1905	82	s	1.8	3 to 6	Mar. 2	Mar. 25	May 20	May 22	do.	May 31	Sept. 10	Do.
Rupestris St. George	F	1903	1905	93	s	3	2 to 5	Mar. 12	do.	May 15	May 20	May 22	June 1	do.	Sept. 19
Salt Creek	F	1903	1905	85	s	1.5	2 to 5	Mar. 6	Apr. 1	May 17	do.	May 25	June 5	Sept. 30	Sept. 20
Solonis × Riparia, No. 1616	F	1904	1906	92	c, s	4.6	2 to 5	Mar. 8	Mar. 30	May 15	May 22	May 26	May 30	Sept. 13	Do.
Taylor Narbonne	F	1904	1906	86	c, s	2.5	2 to 5	Mar. 13	Mar. 25	May 12	May 20	May 25	May 29	Sept. 10	Do.
Ferrara:															
Herbemont	O	1904	1908	92	s	3.2	2 to 5	Mar. 22		June 6	June 11	June 10	June 25	Sept. 27	Oct. 4
Lenoir	O	1904	1908	86	s	2.1	3 to 5	Mar. 18		June 4	June 13	June 9	June 30	Oct. 12	
Fintendo:															
Own roots	Gi	1907			s			Mar. 24	Apr. 1	May 24	May 28	May 30		Sept. 25	
Dog Ridge	O	1904	1906	87	s	3.3	2 to 5	do.		May 28	June 6	June 10	June 21	Sept. 27	Oct. 15
Lenoir	O	1903	1905	88	s	2	3 to 5	do.		May 24	June 8	May 29	June 23	do.	Do.
Rupestris St. George	O	1903	1905	89	s	3.2	2 to 5	Mar. 22		May 23	June 5	May 27	June 19	Sept. 15	Oct. 10
Taylor Narbonne	O	1904	1906	88	s	2.3	2 to 4	Mar. 24		May 21	June 8	May 26	June 21	Sept. 25	Oct. 4
Flame Tokay:															
Own roots	Gi	1904			s			Mar. 18	Mar. 29	May 28	June 7	May 31	June 11	Sept. 20	Sept. 26
Canada	F	1907	1907	91	s	5	3 to 4	Mar. 20	Apr. 2	May 13	May 23	May 26		Sept. 26	
Dog Ridge	O	1904	1907	94	s	3.5	2 to 4	Mar. 24		May 24	June 8	June 1	June 24	Sept. 30	Oct. 20
Lenoir	O	1904	1907	93	s	3.5	3 to 4	Mar. 21		do.	June 5	May 29	June 10	Sept. 27	Oct. 14

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flame Tokay—Continued.				*P. ct.*		*Lbs.*									
Monticola × Riparia, No. 554	F	1907	1907	96	c, s	6	3 to 5	Mar. 22	Apr. 1	May 17	May 22	May 30		Sept. 29	
Monticola × Riparia, No. 18804	F	1907	1907	95	c, s	7	3 to 5	Mar. 23	...do...	May 18	May 26	May 28		...do...	
Monticola × Riparia, No. 18808	F	1907	1907	97	s	7	3 to 6	Mar. 24	Apr. 6	May 20	May 25	May 30			
Monticola × Riparia, No. 18815	F	1907	1907	97	s	6.9	3 to 6	...do...	...do...	...do...	May 22	...do...		Sept. 29	
Riparia à Grandes Feuilles	F	1907	1907	90	s	4.9	3 to 5	Mar. 23	Apr. 2	May 14	May 23	May 24		Sept. 25	
Riparia × Rupestris, No. 101	O	1904	1907	94	s	3.1	2 to 4	Mar. 21		May 24	June 1	May 30	June 21	Sept. 30	Oct. 12
Riparia × Rupestris, No. 3309	O	1904	1907	94	s	4.2	3 to 5	Mar. 22		May 25	June 3	...do...	June 14	Sept. 29	Oct. 8
Do	F	1907	1907	93	c, s	7.1	3 to 5	Mar. 25	Apr. 2	May 21	May 23	June 1			
Rupestris Martin	F	1907	1907	89	c, s	2.7		Mar. 23	...do...	May 19	May 24	May 30		Sept. 26	
Salt Creek	F	1907	1907	91	c, s	4.2	3 to 5	Apr. 1		May 23				Sept. 12	
Taylor Narbonne	F	1907	1907	95	c, s	4.4	3 to 4	Mar. 23	Apr. 2	May 14	May 24	May 24		Sept. 25	
Folle Blanche:															
Rupestris St. George	F	1903	1905	79	s	.9	3 to 6	Mar. 8	Mar. 30	May 15	May 20	May 20	June 5	Sept. 13	Sept. 19
Foster:															
Own roots	Gi	1905			s			Mar. 15	Mar. 28	May 24	May 27	May 30	June 5	Sept. 5	Sept. 20
Lenoir	F	1903	1905	88	s	1.4	3 to 6	Mar. 11	Mar. 25	May 13	May 18	May 22	May 28	Aug. 24	Sept. 22
Riparia Gloire	F	1903	1905	84	s	1.8	3 to 5	Mar. 14	Mar. 30	May 12	May 19	May 23	May 25	Aug. 23	Sept. 19
Rupestris St. George	F	1903	1905	90	s	3	2 to 6	Mar. 15	...do...	May 15	May 20	May 21	June 4	Aug. 24	Sept. 10
Frankenthal Precoce:															
Herbemont	O	1904	1909	72	s	1.1		Mar. 24		June 2	June 7	June 7	June 20		
Lenoir	O	1903	1905	90	c, s	2.2	3 to 5	Mar. 18		May 20	June 1	May 29	June 14	Sept. 23	Oct. 5
Monticola × Riparia, No. 18808	F	1907	1907	90	c, s	3.3		Mar. 20	Mar. 30	May 14	May 24	May 28		Aug. 25	Oct. 17
Monticola × Riparia, No. 18815	F	1907	1907	87	c, s	2.7	4 to 6	...do...	...do...	May 16	May 23	...do...		Aug. 30	Do.
Rupestris St. George	O	1903	1905	92	c, s	2.2	3 to 4							Sept. 23	Sept. 30
Solonis × Othello	F	1907	1907	90	c, s	3	3 to 4	Mar. 29		May 22				Oct. 17	
Solonis × Riparia, No. 1616	F	1907	1907	89	s	3.7	3 to 5	Mar. 25	Apr. 2	May 15	May 22	May 28		Sept. 1	Sept. 21
Fredericton:															
Dog Ridge	F	1907	1907	92	c, s	5		...do...	Apr. 1	May 18	May 23	May 19			
Lenoir	O	1904	1907	91	s	2.8	3 to 4	Mar. 17		May 25	June 5	May 30	June 17	Sept. 25	Sept. 28
Rupestris St. George	F	1907	1907	92	s	5		Mar. 31	Apr. 1	May 21	May 23	June 4			

Fresa de Monferat:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 16	Mar. 29	May 26	May 30	June 6	....	Sept. 23	
Gamay de Bourgogne:															
Own roots	Gi	1907	....	......	s	....	....	Mar. 8	Apr. 8	May 20	....	May 28	....	Sept. 15	
Dog Ridge	O	1904	1906	92	s	3.6	2 to 4	Mar. 20	....	May 19	May 31	May 24	June 11	Sept. 9	Oct. 6
Lenoir	O	1903	1905	91	s	2.4	3 to 5	Mar. 16	....	...do.....	May 30	May 23	June 15	Sept. 8	Sept. 26
Rupestris St. George	O	1903	1905	92	s	4.3	2 to 4	Mar. 18	....	...do.....	June 1	May 24	June 8	Sept. 24	Sept. 25
Gamay Teinturier:															
Own roots	Gi	1904	....	......	s	....	....	...do.....	Apr. 3	May 27	June 3	June 6	....	Aug. 25	Sept. 20
Dog Ridge	O	1904	1906	90	c, s	3.6	3 to 6	Mar. 16	....	May 19	May 31	May 24	June 9	Sept. 22	Sept. 28
Lenoir	O	1903	1905	88	s	2.2	2 to 5	Mar. 15	....	May 24	...do.....	June 1	June 11	Sept. 21	Oct. 5
Rupestris St. George	O	1903	1905	91	s	3.3	2 to 5	Mar. 19	....	May 25	June 3	May 30	June 10	Sept. 25	Oct. 4
Taylor Narbonne	O	1904	1906	73	s	.8	2 to 5	....	....	May 19	May 31	May 25	June 8	Sept. 22	Oct. 1
Gewürz Traminer:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 12	Apr. 1	May 29	May 30	June 6	....	Aug. 28	Sept. 22
Golden Champion:															
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 27	Mar. 30	May 28	June 3	June 2	June 8	Sept. 19	Sept. 20
Do	F	1904	....	......	s	....	....	Mar. 12	Apr. 13	May 10	May 24	May 24	May 29	Sept. 6	Sept. 8
Dog Ridge	O	1904	1906	89	s	4	3 to 5	Mar. 23	....	May 24	June 5	May 29	June 20	Sept. 29	Oct. 25
Lenoir	O	1903	1905	93	s	3.5	2 to 5	Mar. 20	....	...do.....	...do.....	May 27	...do.....	Sept. 28	Oct. 9
Rupestris St. George	O	1903	1906	89	s	3.7	3 to 5	Mar. 17	....	May 21	...do.....	May 26	June 19	Sept. 30	Oct. 15
Golden Hamburg:															
Lenoir	O	1906	1909	90	s	.5	....	Mar. 16	....	June 5	June 8	June 9	June 20	....	
Golden Queen:															
Lenoir	O	1906	1909	91	c, s	.7	....	Mar. 19	....	May 21	...do.....	June 6	June 18	....	
Goolabie:															
Own roots	O	1904	....	90	c, s	4.5	3 to 4	Mar. 18	....	May 12	May 31	May 18	...do.....	Sept. 23	Oct. 8
Gradiska:															
Own roots	Gi	1907	....	......	s	....	....	Mar. 12	Apr. 10	May 26	....	....	....	Sept. 25	
Dog Ridge	O	1904	1907	92	s	2.7	2 to 4	Mar. 22	....	May 23	June 1	May 29	June 17	Sept. 23	Oct. 10
Lenoir	O	1903	1905	90	s	2.4	2 to 5	Mar. 20	....	May 19	June 8	May 23	June 20	...do.....	Oct. 8
St. George	O	1903	1905	86	s	2.9	2 to 4	Mar. 24	....	May 24	June 3	June 1	June 16	Sept. 22	Oct. 10
Taylor Narbonne	O	1904	1906	83	s	1.4	3 to 4	Mar. 20	....	May 21	June 8	May 26	June 7	...do.....	Oct. 4
Green Hungarian:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 12	Apr. 1	May 27	May 30	May 31	June 5	Sept. 19	Sept. 25
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554-5)	O	1907	1909	82	s	2	....	....	....	June 7	....	June 12	....	....	
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	86	s	3	3 to 5	Mar. 22	....	May 22	June 8	May 28	June 20	Sept. 30	Oct. 20
Aramon × Rupestris Ganzin, No. 2	O	1907	1909	76	s	.5	2 to 4	Mar. 21	....	June 1	...do.....	June 5	June 24	Oct. 5	Oct. 14
Berlandieri × Riparia, No. 420A	O	1907	1909	75	s	.7	....	Mar. 19	....	...do.....	June 5	June 6	June 20	....	
Constantia	O	1909	1909	74	s	.9	....	Mar. 20	....	May 28	May 31	June 5	June 4	....	
Dog Ridge	O	1903	1905	89	s	3.8	2 to 5	Mar. 19	....	May 25	June 5	June 1	June 21	Sept. 30	Oct. 15
Herbemont	O	1903	1905	78	s	1.3	2 to 5	Mar. 18	....	May 24	June 14	May 30	June 24	Sept. 30	Oct. 17
Lenoir	O	1903	1905	87	c, s	2.1	2 to 5	...do.....	....	May 25	June 7	...do.....	June 21	Sept. 28	Oct. 8
Monticola × Riparia, No. 18808	O	1907	1909	92	s	3	2 to 3	Mar. 19	....	June 2	June 5	June 7	June 20	Oct. 1	Oct. 10
Mourvedre × Rupestris, No. 1202	O	1904	1906	86	s	1.6	3 to 5	....	....	May 24	....	May 29	....	Sept. 30	Oct. 6
Riparia × Rupestris, No. 101	O	1904	1906	73	s	1.5	3 to 5	Mar. 22	....	May 20	June 5	May 26	June 20	...do.....	Oct. 15
Riparia × Rupestris, No. 3306	O	1907	1909	80	s	.9	2 to 4	Mar. 21	....	June 1	...do.....	June 5	June 18	Oct. 10	
Riparia × Rupestris, No. 3309	O	1904	1906	92	s	3	3 to 4	....	....	May 21	....	May 26	....	Oct. 6	
Rupestris Martin	O	1907	1909	65	s	.2	....	Mar. 21	....	June 1	....	June 5	....	....	

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Green Hungarian—Continued.				*P. ct.*		*Lbs.*									
Rupestris Mission	O	1907	1909	67	s	1	....	Mar. 18	....	June 2	June 5	...do....	....	....	
Rupestris St. George	O	1903	1905	79	s	1.4	2 to 5	...do....	....	May 26	June 1	June 2	June 12	Sept. 29	Oct. 10
Salt Creek	O	1903	1905	90	s	2	2 to 5	....	....	May 24	....	May 29	....	Oct. 6	
Solonis Robusta	O	1907	1909	82	s	1.5	3 to 5	Mar. 21	....	May 25	June 1	June 6	June 20	Oct. 1	Oct. 11
Solonis × Othello, No. 1613	O	1907	1909	83	s	.9	2 to 3	Mar. 20	....	June 1	....	...do....	....	Oct. 5	
Solonis × Riparia, No. 1616	O	1904	1906	68	s	1.9	2 to 5	Mar. 19	....	May 24	June 10	May 30	June 22	Sept. 30	Oct. 15
Taylor Narbonne	O	1904	1904	81	s	1.7	3 to 5	Mar. 22	....	May 25	June 1	...do....	June 12	Sept. 29	Do.
Grenache:															
Own roots	Gi	1901	....	......	s	....	....	...do....	Mar. 28	May 28	May 31	June 1	June 7	Sept. 20	Oct. 24
Dog Ridge	O	1904	1906	91	c, s	4.2	2 to 4	Mar. 24	....	May 20	June 2	May 26	June 19	Sept. 29	Oct. 15
Lenoir	O	1903	1905	91	c, s	4	2 to 4	Mar. 20	....	May 21	June 3	May 27	June 18	Sept. 25	Oct. 6
Rupestris St. George	O	1903	1905	90	s	4.7	2 to 4	Mar. 19	....	...do....	June 8	...do....	June 26	...do....	Oct. 9
Taylor Narbonne	O	1904	1906	88	s	2.8	2 to 4	Mar. 22	....	May 24	June 1	May 30	June 19	Sept. 29	Oct. 10
Gros Blanc de Lausanne:															
Lenoir	O	1904	1907	86	s	2	3 to 6	Mar. 20	....	May 20	June 10	May 25	June 20	Sept. 28	Oct. 7
Solonis × Othello	F	1907	1907	85	c, s	2.5	3 to 4	Mar. 16	Mar. 30	May 10	May 21	May 29	....	Aug 25	
Gros Guillaume:															
Lenoir	O	1904	1911	90	s	2.5	....	....	....	....	....	....	....	....	
Gros Manzenc:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 16	Apr. 1	May 26	May 30	June 5	....	Sept. 15	Sept. 25
Gros Maroc:															
Own roots	Gi	1905	....	......	s	....	....	Mar. 13	...do....	May 18	May 29	May 21	June 4	Sept. 25	
Gros Verdot:															
Own roots	Gi	1907	....	......	s	....	....	Mar. 20	...do....	May 26	....	....	....	...do....	
Dog Ridge	F	1903	1905	92	s	4	3 to 6	Mar. 13	...do....	May 16	May 20	May 26	June 4	Aug. 24	Sept. 20
Do	O	1901	1906	90	s	4.5	3 to 5	Mar. 17	....	May 25	May 31	May 30	June 15	Sept. 28	Oct. 5
Lenoir	O	1903	1905	90	s	2.8	2 to 4	Mar. 18	....	May 23	June 3	May 27	June 14	Sept. 27	Do.
Do	F	1903	1905	80	s	1	2 to 4	Mar. 14	Mar. 30	May 15	May 18	May 23	May 29	Aug. 24	Sept. 19
Rupestris St. George	F	1903	1905	88	s	1.7	2 to 5	Mar. 12	Apr. 1	May 14	May 20	May 24	May 30	...do....	Do.
Do	O	1903	1905	89	s	3.7	2 to 5	Mar. 20	....	May 20	May 31	May 26	June 20	Sept. 30	Oct. 10
Taylor Narbonne	O	1904	1906	86	s	2.1	2 to 4	...do....	....	May 23	June 4	June 3	...do....	Sept. 27	Oct. 6

Hebron:														
Lenoir	O	1904	1907	89	s	3.4	2 to 4	Mar. 21	....	May 25	June 3	May 30	June 16	Sept. 29	Oct. 12
Rupestris St. George	F	1907	1907	91	c, s	5.7	....	Mar. 22	Apr. 8	May 15	....	June 2	....	Sept. 21	
Solonis × Othello, No. 1613	F	1907	1907	95	c, s	7.5	....	Mar. 23	...do...	May 20	....	June 4	....	...do...	
Huasco:															
Own roots	Gi	1904	1904	......	s	....	....	Mar. 24	Apr. 3	May 21	June 10	May 28	June 16	Sept. 14	Sept. 22
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	88	s	3	2 to 5	Mar. 13	...do...	May 15	May 28	...do...	June 3	Sept. 8	Sept. 20
Do	O	1904	1907	91	s	2	3 to 5	Mar. 26	....	June 8	June 9	June 16	June 22	Oct. 5	
Aramon × Rupestris Ganzin, No. 2	F	1909	1909	85	s	3	....	Mar. 8	....	May 27	....	....	....	Oct. 16	
Australis	F	1907	1909	90	s	2	....	Apr. 5	....	May 23	....	....	....	Sept. 5	
Berlandieri × Riparia, No. 420A	F	1907	1909	84	s	1	....	Apr. 1	....	May 21	....	....	....	Sept. 10	Oct. 16
Lenoir	F	1903	1905	86	s	1.4	2 to 5	Mar. 6	Apr. 1	May 12	May 20	May 23	May 30	...do...	Sept. 15
Monticola × Riparia, No. 18808	F	1907	1909	90	s	4.5	....	Apr. 2	....	May 27	....	....	....	Oct. 16	
Mourvedre × Rupestris, No. 1202	F	1904	1906	89	s	2.8	2 to 5	Mar. 22	Apr. 5	May 14	June 2	May 30	June 12	Sept. 5	Sept. 20
Riparia Gloire	F	1903	1905	84	c, s	4.4	2 to 5	Mar. 12	Apr. 1	May 24	May 29	May 29	June 11	Sept. 10	Sept. 19
Riparia × (Cordifolia × Rupestris, No. 106-8)	F	1907	1909	88	s	2.5	....	Apr. 1	....	May 27	....	....	....	Sept. 5	
Riparia × Rupestris, No. 101	F	1904	1906	88	s	2.1	2 to 5	Mar. 17	Mar. 26	May 14	May 29	May 26	June 7	Sept. 4	Sept. 20
Do	O	1904	1907	90	s	1.1	3 to 4	Mar. 24	....	June 6	June 10	June 10	June 26	Sept. 28	
Riparia × Rupestris, No. 3309	F	1904	1906	88	s	3.4	2 to 5	Mar. 23	Apr. 5	May 13	May 27	May 28	June 3	Sept. 10	Do.
Rupestris St. George	F	1903	1905	90	s	2.3	2 to 5	Mar. 12	...do...	May 20	May 30	June 1	June 4	Sept. 9	Sept. 19
Solonis Robusta	F	1907	1909	88	s	3	....	Apr. 1	....	May 24	....	....	....	Oct. 16	
Solonis × Riparia, No. 1616	F	1904	1906	84	s	2	....	Mar. 22	Apr. 3	May 20	May 23	May 28	June 4	Sept. 10	
Taylor Narbonne	F	1904	1906	92	s	3.1	2 to 6	Mar. 7	Mar. 29	May 17	May 30	May 30	June 6	Sept. 17	Sept. 20
Viala	F	1907	1909	89	s	2	....	Apr. 1	....	May 29	....	....	....	Sept. 25	
Hunisa:															
Adobe Giant	F	1904	1906	86	s	1.5	3 to 5	Mar. 8	Mar. 26	May 16	May 28	May 27	June 4	Sept. 5	
Australis	F	1907	1909	91	c, s	4	....	Mar. 27	....	May 21	....	....	....	Sept. 30	Oct. 18
Berlandieri × Riparia, No. 420A	F	1907	1909	90	c, s	4	....	Mar. 24	....	May 23	....	....	....	Oct. 18	
Constantia	F	1907	1909	92	c, s	5	....	Mar. 23	....	May 24	....	....	....	Oct. 5	
Dog Ridge	F	1903	1906	95	c, s	2.9	4 to 5	Mar. 5	Mar. 28	May 20	May 25	May 28	June 5	....	
Riparia × Rupestris, No. 3309	F	1907	1907	97	s	....	....	Mar. 30	Apr. 5	May 19	...do...	June 1	....	....	
Solonis Robusta	F	1907	1909	98	s	3	....	Mar. 21	....	May 23	....	....	....	Sept. 25	
Solonis × Riparia, No. 1616	F	1907	1907	96	c, s	8.3	3 to 5	Mar. 23	Apr. 1	May 16	May 26	May 30	....	....	
Hunisa (S. P. I. No. 6124):															
Own roots	O	1904	....	......	s	8	....	....	....	June 5	June 8	June 11	....	....	
Hunisa (S. P. I. No. 8583):															
Own roots	O	1904	....	......	c, s	6.7	2 to 4	Mar. 16	....	May 15	June 12	May 21	June 27	Oct. 10	
Hutab:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 29	...do...	June 1	June 6	June 13	....	....	
Hycales:															
Lenoir	O	1904	1907	88	s	2.2	2 to 5	Mar. 18	....	May 19	June 5	May 24	June 17	Sept. 28	Oct. 7
Rupestris Mission	F	1907	1907	97	c, s	10	1 to 4	Mar. 22	Apr. 5	May 16	May 23	May 31	....	....	
Rupestris St. George	F	1907	1907	97	c, s	4.4	2 to 4	Mar. 20	Mar. 28	May 5	May 22	May 25	....	Aug. 25	Oct. 9
Solonis × Othello, No. 1613	F	1907	1907	90	c, s	3	1 to 4	Mar. 17	Apr. 8	May 15	May 22	May 29	....	Sept. 20	Oct. 17
Imperial:															
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 26	Apr. 1	May 26	June 6	May 30	June 12	Sept. 25	
Inzolia Bianca:															
Lenoir	O	1904	1907	84	s	1.8	2 to 4	Mar. 24	....	May 22	June 7	May 27	June 20	Sept. 23	Oct. 7
Rupestris St. George	F	1907	1907	90	s	4.1	3 to 5	Mar. 23	Apr. 1	...do...	May 24	June 3	....	Aug. 25	Sept. 21

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Johannisberger:				P. ct.		Lbs.									
Own roots	Gi	1904	......	......	c, s	......	......	Mar. 15	Mar. 26	May 29	......	June 3	......	Sept. 5	Sept. 20
Jura Muscat:															
Lenoir	F	1903	1905	81	s	.8	2 to 5	Mar. 7	Mar. 25	May 4	May 18	May 20	May 25	Aug. 10	Sept. 19
Riparia Gloire	F	1903	1905	89	s	3.3	3 to 5	Mar. 8	Mar. 20	May 12	May 21	May 25	May 31	Aug. 20	Do.
Rupestris St. George	F	1903	1905	91	s	2.5	3 to 5	Mar. 9	...do...	May 15	May 18	May 21	......	Aug. 5	Do.
Kabbajuk:															
Own roots	O	1904	......	......	s	8	2 to 3	Mar. 22	......	May 16	June 1	...do...	June 20	Sept. 29	Oct. 15
Kadarka:															
Own roots	Gi	1904	......	......	c, s	......	......	Mar. 25	Mar. 27	May 30	June 6	June 11	......	Sept. 15	Sept. 25
Dog Ridge	F	1903	1905	93	s	4.8	2 to 6	Mar. 14	Apr. 3	May 23	May 30	May 30	June 10	Sept. 10	Sept. 20
Lenoir	F	1903	1905	92	c, s	3.3	2 to 6	Mar. 7	Apr. 1	May 20	May 22	May 27	June 4	...do...	Sept. 19
Riparia Gloire	F	1903	1905	90	c, s	3.9	3 to 7	Mar. 8	Apr. 5	...do...	May 27	May 28	June 7	Sept. 5	Do.
Rupestris St. George	F	1903	1905	95	c, s	4	1 to 6	Mar. 13	Apr. 1	May 11	May 20	May 24	May 30	Sept. 12	Do.
Kechmish-Aly-Blanc:															
Lenoir	O	1904	1907	84	s	2.6	3 to 5	Mar. 21	......	May 25	June 12	May 30	June 28	Sept. 23	Oct. 5
Solonis × Othello, No. 1613	F	1907	1907	92	s	3.5	......	Mar. 23	Mar. 30	May 20	May 22	June 4	......	......	
Keropodia:															
Lenoir	O	1904	1907	90	c, s	4	2 to 5	Mar. 22	......	...do...	June 5	May 29	June 23	Sept. 23	Oct. 20
Riparia × Rupestris, No. 3309	F	1907	1907	90	c, s	5.5	......	Mar. 20	Apr. 5	May 16	May 23	June 2	......	......	
Key:															
Herbemont	O	1904	1909	47	s	.9	......	Mar. 22	......	June 5	June 7	June 12	June 17	......	
Lenoir	O	1904	1906	83	s	2	1 to 5	Mar. 24	......	May 27	June 13	June 1	June 22	Sept. 30	Do.
Kleinburger:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 10	Apr. 5	May 22	May 30	May 27	June 5	Aug. 29	Sept. 28
Kölner:															
Own roots	Gi	1904	......	......	s	......	......	...do...	Mar. 30	May 27	...do...	May 31	...do...	Sept. 10	Sept. 26
Dog Ridge	O	1904	1906	88	c, s	2.6	2 to 4	Mar. 17	......	...do...	June 3	June 1	June 15	Sept. 26	Oct. 3
Lenoir	O	1903	1905	89	s	2.4	2 to 6	Mar. 15	......	May 23	June 8	May 27	June 21	...do...	Oct. 15
Rupestris St. George	O	1903	1905	88	s	2.8	3 to 5	Mar. 16	......	...do...	June 1	May 23	June 17	...do...	Oct. 10
Taylor Narbonne	O	1904	1906	73	s	.8	2 to 4	Mar. 18	......	May 22	...do...	...do...	June 13	...do...	Oct. 4

Kuristi Mici:															
Lenoir	O	1904	1907	81	s	2.1	3 to 5	Mar. 25	....	May 25	June 9	May 29	June 25	Oct. 7	Oct. 10
Kurtelaska:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 20	Mar. 29	May 30	June 1	June 6	....	Sept. 24	Sept. 25
Do	O	1904	....	......	s	3	3 to 4	Mar. 25	....	May 19	June 8	May 24	June 18	Sept. 28	
Labntraube:															
Own roots	F	1903	1905	76	s	.7	2 to 7	Mar. 12	Mar. 25	May 15	May 22	May 20	June 4	Aug. 24	Sept. 25
Riparia Gloire	F	1903	1905	83	s	1.8	2 to 5	Mar. 13	...do....	May 12	May 17	May 21	May 28	Aug. 20	Sept. 19
Rupestris St. George	F	1903	1905	85	s	2.4	3 to 6	Mar. 12	...do....	...do....	May 18	...do....	May 25	Aug. 25	Do.
Leani Zolo:															
Rupestris St. George	F	1903	1905	89	s	2.3	3 to 5	Mar. 11	Mar. 27	May 13	May 17	May 22	May 26	Aug. 26	Do.
Lignan Blanc:															
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 12	Mar. 29	May 27	....	....	....	Sept. 19	
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	89	s	2.4	2 to 6	...do....	Apr. 1	May 15	May 23	May 27	May 31	Sept. 10	Do.
Dog Ridge	O	1904	1906	83	s	1.2	4 to 6	Mar. 19	....	May 24	June 3	May 29	June 10	Sept. 25	Oct. 3
Do	F	1904	1906	89	c, s	3.4	2 to 5	Mar. 13	Apr. 1	May 20	May 28	May 26	June 2	Sept. 12	Sept. 20
Hotporup	F	1907	1907	89	s	2	....	Mar. 25	Apr. 3	May 12	May 24	...do....	....	....	
Lenoir	O	1903	1905	89	c, s	2.7	3 to 5	Mar. 15	....	May 26	June 3	June 2	June 13	Sept. 26	Oct. 9
Do	F	1903	1905	80	s	.4	2 to 6	Mar. 12	Mar. 30	May 15	May 19	May 23	May 26	Sept. 12	Sept. 25
Mourvedre × Rupestris, No. 1202	O	1904	1909	95	s	....	....	Mar. 20	June 1	June 10	June 5	June 25	....	....	
Do	F	1904	1906	87	c, s	1.6	2 to 6	Mar. 23	Apr. 1	May 20	May 24	May 26	May 30	Sept. 14	Sept. 20
Riparia Gloire	F	1903	1905	86	c, s	2.6	3 to 7	Mar. 8	...do....	May 15	May 21	May 23	June 2	Sept. 13	Sept. 19
Riparia × Rupestris, No. 101	O	1904	1906	82	s	1.6	2 to 5	Mar. 14	...do....	...do....	May 23	May 25	May 28	Sept. 15	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	88	c, s	2	2 to 6	Mar. 13	...do....	May 13	May 26	...do....	June 3	Sept. 13	Do.
Rupestris St. George	O	1903	1905	91	s	2.9	3 to 5	Mar. 17	....	May 24	May 31	May 30	June 13	Sept. 26	Oct. 1
Do	F	1903	1905	87	c, s	2.8	2 to 6	Mar. 13	Mar. 30	May 15	May 20	May 22	May 28	Sept. 10	Sept. 19
Solonis × Othello	F	1907	1907	88	c, s	2.3	....	Mar. 18	...do....	May 10	May 22	May 27	....	Sept. 17	Oct. 21
Solonis × Riparia, No. 1616	F	1904	1906	83	s	1.4	2 to 5	Mar. 20	Apr. 1	May 17	May 23	May 23	May 30	Sept. 12	Sept. 20
Taylor Narbonne	F	1904	1906	85	s	1	2 to 5	...do....	...do....	May 20	...do....	May 28	...do....	...do....	Do.
Do	O	1904	1906	84	s	1.6	2 to 5	Mar. 18	....	May 21	June 11	May 26	June 15	Sept. 25	Oct. 4
Listan:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 16	Mar. 31	May 22	June 1	May 27	June 6	Sept. 20	Sept. 23
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5)	O	1907	1909	89	s	2.1	2 to 3	Mar. 22	....	May 30	June 5	June 9	June 14	Sept. 25	Oct. 10
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	97	s	3.5	2 to 4	Mar. 18	....	May 19	June 3	May 25	June 20	Sept. 21	Oct. 4
Aramon × Rupestris Ganzin, No. 2	O	1907	1909	86	s	.9	2 to 4	Mar. 19	....	May 26	June 2	June 8	June 14	Sept. 20	
Berlandieri × Riparia, No. 420B	F	1907	1907	96	c, s	7	2 to 5	Mar. 26	Apr. 1	May 10	May 22	May 26	....	Aug. 26	
Columbaud × Riparia, No. 2502	O	1907	1909	89	s	2.1	....	Mar. 18	....	May 30	June 3	June 7	June 15	Oct. 10	
Constantia	O	1907	1909	92	s	3.8	2 to 3	...do....	....	May 25	May 31	June 4	June 12	Sept. 23	Oct. 10
Cornucopia	F	1907	1907	90	s	4.3	2 to 4	Mar. 21	Apr. 1	May 18	May 22	June 1	....	Aug. 25	Sept. 21
De Grassett	F	1907	1907	94	c, s	5	2 to 5	Mar. 26	Apr. 3	May 15	May 24	June 2	....	...do....	Oct. 17
Dog Ridge	O	1903	1905	93	s	3.5	2 to 5	Mar. 18	....	May 26	June 4	May 30	June 20	Sept. 23	Oct. 10
Herbemont	O	1903	1905	83	s	2.2	1 to 4	Mar. 21	....	May 22	June 5	May 28	June 19	Sept. 22	Oct. 5
Lenoir	O	1903	1905	87	s	2.7	2 to 5	Mar. 20	....	May 20	...do....	May 25	June 20	Sept. 16	Oct. 10
Monticola × Riparia, No. 18804	F	1907	1907	95	c, s	5.5	1 to 5	Mar. 21	Apr. 3	May 18	May 23	June 4	....	Aug. 25	Sept. 21
Monticola × Riparia, No. 18808	O	1907	1909	92	s	2.8	3 to 4	Mar. 20	....	June 3	June 5	June 8	June 20	Sept. 25	
Mourvedre × Rupestris, No. 1202	O	1904	1906	95	s	5	2 to 5	Mar. 18	....	May 25	June 8	May 30	June 24	Sept. 21	Oct. 11
Riparia × Rupestris, No. 101	O	1904	1906	93	s	3.2	3 to 4	...do....	....	May 20	...do....	May 25	June 30	Sept. 22	Do.
Do	F	1907	1907	87	s	2.5	2 to 4	Mar. 24	Apr. 5	May 18	May 24	May 30	....	Sept. 21	
Riparia × Rupestris, No. 101–14	O	1907	1909	86	s	1.1	3 to 4	Mar. 17	....	May 28	May 31	June 4	June 15	Sept. 20	Oct. 11

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Listan—Continued.				*P. ct.*		*Lbs.*									
Riparia × Rupestris, No. 3306	O	1907	1909	94	s	1.3	3 to 4	Mar. 18	....	May 31	June 8	June 4	June 21	Sept. 25	
Riparia × Rupestris, No. 3309	F	1907	1907	92	c, s	3.2	4 to 5	Mar. 21	Apr. 2	May 12	May 21	May 26	....	Sept. 21	
Do	O	1904	1906	92	s	2.3	3 to 4	Mar. 18	....	May 23	June 8	May 28	June 14	Sept. 26	Oct. 9
Rupestris Martin	O	1903	1905	93	s	3.8	2 to 5	Mar. 20	....	May 22	June 5	...do....	June 10	Sept. 22	Oct. 6
Rupestris Metallica	O	1907	1909	88	s	1.2	3 to 4	Mar. 17	....	June 8	....	June 13	June 20	Sept. 25	
Rupestris Mission	O	1907	1909	87	s	.9	....	...do....	....	June 3	....	June 6	....	....	
Rupestris St. George	F	1903	1905	86	s	1.5	4 to 6	Mar. 13	Apr. 1	May 16	May 20	May 22	June 1	....	
Do	O	1903	1905	87	s	2.1	2 to 5	Mar. 18	....	May 20	June 1	May 26	June 13	Sept. 18	Oct. 8
Rupestris × Berlandieri, No. 219A	F	1907	1907	90	c, s	5.2	1 to 4	Mar. 22	....	May 22	....	....	....	Sept. 21	
Salt Creek	O	1903	1905	94	s	3.4	2 to 5	Mar. 19	....	...do....	June 5	May 27	June 10	...do....	Oct. 5
Solonis Robusta	F	1907	1907	97	c, s	6.4	1 to 4	...do....	Apr. 2	May 15	May 22	May 30	....	Aug. 25	Sept. 21
Do	O	1907	1909	90	s	4	2 to 4	Mar. 18	....	June 2	June 10	June 7	June 18	Sept. 20	Oct. 11
Solonis × Othello	F	1907	1907	97	c, s	6.8	2 to 5	Mar. 25	Apr. 1	May 16	May 22	May 30	....	Sept. 5	Sept. 21
Solonis × Othello, No. 1613	O	1907	1909	88	s	1.2	3 to 4	Mar. 20	....	June 2	June 5	June 8	June 10	Sept. 25	Oct. 11
Solonis × Riparia, No. 1616	O	1904	1906	91	c, s	3.2	2 to 4	Mar. 18	....	May 25	June 3	May 30	June 11	Sept. 21	Oct. 9
Taylor Narbonne	O	1904	1906	93	c, s	3.3	2 to 4	Mar. 16	....	May 22	June 7	May 28	...do....	Sept. 22	Oct. 8
Valencia	F	1907	1907	96	c, s	8.5	2 to 5	Mar. 19	Apr. 1	May 15	May 23	May 31	....	Aug. 25	Sept. 21
Luglienga Nera:															
Adobe Giant	F	1904	1906	82	s	1.5	3 to 5	Mar. 13	...do....	May 18	May 20	May 25	May 30	Sept. 14	Do.
Dog Ridge	F	1903	1905	86	s	1.7	3 to 6	Mar. 7	Apr. 3	May 11	...do....	May 21	May 29	Aug. 25	Sept. 20
Riparia × Rupestris, No. 3309	F	1907	1907	88	c, s	1.5	....	Mar. 15	....	May 23	....	....	....	Sept. 21	
Rupestris St. George	F	1903	1905	87	c, s	2.1	4 to 6	Mar. 11	Mar. 25	May 10	May 19	May 21	May 23	Aug. 25	Sept. 19
Macunier:															
Own roots	Gi	1907	....	....	s	....	....	Mar. 10	Apr. 5	May 20	May 25	May 25	June 5	Sept. 4	Sept. 20
Madeleine Angevine:															
Own roots	Gi	1905	....	....	s	....	....	...do....	Mar. 30	May 25	June 2	June 1	June 7	Aug. 29	
Dog Ridge	O	1904	1907	90	s	1.8	2 to 5	....	....	May 19	May 30	May 24	June 11	Sept. 20	Oct. 2
Lenoir	O	1903	1905	90	s	2.6	2 to 4	Mar. 15	....	May 24	May 26	May 28	June 6	...do....	Oct. 8
Rupestris St. George	O	1903	1905	89	s	5.1	2 to 4	Mar. 16	....	May 25	May 31	June 1	June 15	Sept. 22	Sept. 25
Madeleine Blanche:															
Own roots	Gi	1905	....	....	c, s	....	....	Mar. 25	Mar. 29	May 30	June 6	June 3	June 11	Aug. 28	Sept. 19

Madeleine d'Ambre:															
Dog Ridge	O	1904	1906	94	c, s	5.3	3 to 4	Mar. 19		May 23	June 5	May 28	June 16	Oct. 4	Oct. 15
Lenoir	O	1903	1905	94	s	4	3 to 4	Mar. 22		May 24	June 4	May 27	June 7	Sept. 23	Oct. 2
Rupestris St. George	O	1903	1905	95	s	6	2 to 5	Mar. 20		...do...	June 5	May 29	June 17	Sept. 24	Sept. 30
Madeleine Rose:															
Own roots	Gi	1905			c, s			...do...	Mar. 30	June 1				Sept. 25	
Riparia Gloire	O	1904		88	c, s	4	2 to 4	Mar. 22		...do...		June 5	June 20	Sept. 23	Oct. 2
Madeleine Royale:															
Own roots	Gi	1905			c, s			Mar. 12	Mar. 28	May 25				Sept. 15	
Dog Ridge	O	1904	1906	93	s	4.9	2 to 5	Mar. 27		May 19	May 31	May 25	June 8	Sept. 20	Oct. 1
Lenoir	O	1903	1905	90	s	3.7	2 to 5	Mar. 16		May 13	May 24	...do...	June 11	...do...	Do.
Malaga:															
Own roots	Gi	1904			c, s			...do...	Mar. 25	May 24	May 29	May 29	June 4	Aug. 29	Sept. 20
Adobe Giant	F	1904	1906	93	c, s	4	2 to 4	Mar. 10	Mar. 26	May 15	May 21	May 22	May 30	Sept. 15	Do.
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	90	c, s	4.7	2 to 5	Mar. 9	Mar. 25	May 16	May 29	May 23	June 6	...do...	Do.
Canada	F	1907	1907	97	s	3	1 to 4	Mar. 15	Mar. 29	May 19	May 23	May 30			
Constantia	F	1907	1907	84	s	2.7	1 to 4	Mar. 18	Mar. 25	May 17	May 22	May 27		Sept. 16	
Dog Ridge	F	1903	1905	95	c, s	6	1 to 4	Mar. 7	...do...	May 14	May 21	May 24	May 29	Sept. 8	Sept. 20
Herbemont	F	1903	1905	84	s	1.6	2 to 4	...do...	...do...	May 12	May 20	...do...	May 26	Sept. 12	Do.
Lenoir	F	1903	1905	85	c, s	1.6	2 to 5	Mar. 10	Mar. 20	May 14	May 22	May 27	May 29	Sept. 10	Do.
Mourvedre × Rupestris, No. 1202	F	1904	1906	95	c, s	6.7	2 to 5	Mar. 7	...do...	...do...	May 20	May 21	May 26	...do...	Do.
Riparia Gloire	F	1903	1905	96	c, s	5.8	2 to 5	Mar. 8	Mar. 25	May 13	May 18	...do...	May 23	Sept. 5	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	93	c, s	5.1	2 to 5	Mar. 13	...do...	May 12	May 24	May 23	May 30	Sept. 12	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	95	c, s	5.1	2 to 4	Mar. 12	...do...	May 16	May 22	May 27	...do...	Sept. 14	Do.
Rupestris Martin	F	1903	1905	88	s	2.7	2 to 4	Mar. 17	...do...	May 14	May 21	May 25	May 29	Sept. 12	Do.
Rupestris St. George	F	1903	1905	94	c, s	4.9	2 to 5	Mar. 12	Mar. 20	May 15	May 26	May 23	May 30	Sept. 10	Sept. 19
Salt Creek	F	1903	1905	89	c, s	2.7	2 to 5	Mar. 6	Mar. 30	...do...	May 27	May 24	...do...	Sept. 5	Sept. 20
Solonis × Riparia, No. 1616	F	1904	1906	93	c, s	3.5	2 to 4	Mar. 9	Mar. 27	May 18	May 27	...do...	June 3	Sept. 13	Sept. 16
Taylor Narbonne	F	1904	1906	90	c, s	3.8	2 to 5	Mar. 6	Mar. 23	May 8	May 17	May 22	May 27	Sept. 1	Sept. 20
Malaga Blanc:															
Lenoir	F	1903	1905	85	s	1.7	2 to 6	Mar. 23	Apr. 3	May 15	May 20	May 24	June 4	Sept. 7	Sept. 15
Riparia Gloire	F	1903	1905	89	c, s	3.3	1 to 5	Mar. 24	...do...	May 22	May 30	May 28	June 8	Sept. 3	Sept. 19
Rupestris St. George	F	1903	1905	89	c, s	2.5	2 to 6	Mar. 15	Mar. 31	May 12	May 18	May 21	May 30	Sept. 9	Do.
Malbeck:															
Own roots	Gi	1907			c, s			Mar. 16	Mar. 28	May 30		June 5		Aug. 27	Sept. 23
Malvasia:															
Own roots	Gi	1904			s			Mar. 20	Apr. 2	May 22	May 30	May 27	June 6	Aug. 28	Sept. 24
Lenoir	O	1904	1909	88	s	2		Mar. 19		May 30	June 2	June 7	June 10		
Rupestris St. George	O	1902	1909	85	s	2.7		Mar. 22		June 3	June 5	June 9	June 17		
Malvasia de Broglio:															
Own roots	Gi	1904			s			Mar. 21	Mar. 31	May 30	June 3	June 4	June 8	Sept. 20	Sept. 23
Malvasia Rosaria:															
Own roots	Gi	1904			s			Mar. 18	Apr. 1	May 28	...do...	June 2	June 9	Sept. 18	Sept. 25
Dog Ridge	F	1903	1905	93	c, s	5.4	3 to 5	Mar. 8	Apr. 6	May 22	June 1	May 30	...do...	Sept. 5	Sept. 20
Herbemont	O	1904	1909	93	s	3.6									
Lenoir	F	1903	1905	80	s	.8	3 to 6	Mar. 20	Apr. 3	May 18	May 21	May 23	June 4	Sept. 11	Sept. 17
Riparia Gloire	F	1903	1905	91	c, s	2.6	2 to 6	Mar. 13	Apr. 1	May 15	May 26	May 29	June 3	Sept. 10	Sept. 19
Rupestris St. George	F	1903	1905	90	s	2.3	2 to 6	...do...	...do...	May 18	May 30	May 23	June 5	Sept. 8	Do.
Malvasia Rovasenda:															
Own roots	Gi	1904			s			Mar. 18	...do...	May 22	June 2	May 27	June 9	Sept. 5	Sept. 22

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mamelon:				*P. ct.*		*Lbs.*									
Own roots	Gi	1907			s			Mar. 15	Apr. 8	May 20	May 30	May 30	June 2		
Dog Ridge	O	1904	1907	91	c, s	3.1	3 to 5	Mar. 17		May 25	June 5	...do...	June 15	Sept. 22	Oct. 8
Lenoir	O	1903	1905	94	c, s	4.2	2 to 5	Mar. 16		May 23	June 5	May 27	June 13	Sept. 19	Oct. 6
Rupestris St. George	O	1903	1905	90	s	4.7	2 to 4	Mar. 17		May 21	June 8	May 30	June 15	Sept. 21	Sept. 30
Taylor Narbonne	O	1904	1906	87	s	2.3	3 to 5	Mar. 21		...do...	...do...	May 29	June 16	Sept. 20	Oct. 4
Valencia	F	1907	1907	89	c, s	.9		Mar. 12		...do...				Oct. 17	
Mantuo de Pilas:															
Own roots	Gi	1904			c, s			Mar. 10	Mar. 24	May 26	June 3	May 30	June 9	Sept. 20	Sept. 25
Adobe Giant	F	1904	1906	88	s	2.4	3 to 4	Mar. 11	Mar. 26	May 13	May 19	May 19	May 27	Sept. 15	Sept. 20
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	95	c, s	2.6	3 to 6	Mar. 10	Mar. 25	May 12	...do...	May 23	May 26	Sept. 5	...do...
Dog Ridge	F	1903	1905	86	c, s	2.5	3 to 5	Mar. 13	Mar. 27	May 14	May 20	May 24	May 30	Sept. 15	...do...
Herbemont	F	1903	1905	83	s	2	3 to 5	Mar. 7	Mar. 24	May 15	May 23	May 27		Sept. 5	...do...
Lenoir	F	1903	1905	87	s	1.8	3 to 5	...do...	Mar. 27	May 14	May 18	May 20	May 26	Sept. 10	Sept. 23
Do	O	1903	1905	89	s	2.9	3 to 4	Mar. 24		May 20	June 1	May 23	June 14	Sept. 23	Oct. 9
Mourvedre × Rupestris, No. 1202	F	1904	1906	93	c, s	3.7	3 to 6	Mar. 12	Mar. 26	May 15	May 20	May 24	May 30	Sept. 10	Sept. 20
Riparia Gloire	F	1903	1905	93	c, s	3.1	3 to 5	...do...	Mar. 20	...do...	May 21	May 25	...do...	Sept. 14	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	89	c, s	2.8	2 to 6	...do...	...do...	May 12	May 23	...do...	May 29		
Riparia × Rupestris, No. 3309	F	1904	1906	93	c, s	2.9	3 to 6	Mar. 1	Mar. 30	May 13	May 22	...do...	May 28	Sept. 14	Sept. 20
Rupestris Martin	F	1903	1905	86	s	1.3	3 to 5	Mar. 13	Mar. 26	May 17	May 20	May 24	June 4	Sept. 8	Do.
Rupestris St. George	F	1903	1905	92	c, s	3.4	2 to 6	Mar. 12	Mar. 25	May 14	May 18	May 23	June 2	Sept. 10	Sept. 19
Do	O	1903	1908	87	s	3.1	2 to 4	Mar. 20		May 21	June 2	May 27	June 15	Sept. 22	Sept. 30
Salt Creek	F	1903	1905	86	s	1.7	2 to 6	Mar. 6	Mar. 30	May 13	May 21	May 24	June 3	Sept. 5	Sept. 20
Solonis × Riparia, No. 1616	F	1903	1905	92	c, s	4	4 to 6	Mar. 12	...do...	May 14	May 23	May 25	May 28	Sept. 13	Sept. 16
Taylor Narbonne	F	1904	1906	91	c, s	3.2	2 to 5	Mar. 6	Mar. 25	May 15	...do...	May 23	May 29	...do...	Do.
Marascina:															
Own roots	Gi	1905			c, s			Mar. 25	Mar. 30	May 30	June 6	June 5	June 12	Sept. 23	Sept. 24
Lenoir	O	1904		84	s	3.5		Mar. 23	May 10	June 1	May 16	June 18			
Maraville de Malaga:															
Lenoir	O	1904	1907	85	s	2.1	3 to 5	...do...		May 22	June 8	May 27	June 24	Sept. 24	Oct. 20
Riparia × Rupestris, No. 3309	F	1907	1907	92	c, s	6.3		Mar. 13	Apr. 8	May 20	May 23	...do...		Sept. 25	
Solonis × Othello, No. 1613	F	1907	1907	87	s	2.1	3 to 5	Mar. 11	...do...	May 21	May 26	June 2		Sept. 20	Sept. 21

Marmola Tobead:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 23	Apr. 10	May 29	......	......	......	Sept. 24	
Marmora:															
Lenoir	F	1903	1905	85	s	1.5	2 to 6	Mar. 15	Apr. 3	May 18	May 20	May 24	May 30	Aug. 24	Sept. 27
Riparia Gloire	F	1903	1905	85	s	2.2	3 to 6	Mar. 8	Apr. 1	May 15	...do...	May 25	June 4	...do...	Sept. 19
Rupestris St. George	F	1903	1905	86	c, s	2	3 to 7	Mar. 15	Mar. 28	May 18	May 25	May 23	June 7	...do...	Do.
Marsanne:															
Own roots	Gi	1904	......	......	s	......	......	...do...	Mar. 27	May 26	June 4	May 31	June 9	Aug. 28	Sept. 22
Marzemino:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 12	Apr. 3	...do...	......	June 2	......	Sept. 20	Sept. 23
Do	O	1904	......	......	s	......	3 to 4	Mar. 23	......	May 9	June 5	May 15	June 17	Sept. 23	
Mataro:															
Own roots	Gi	1907	......	......	s	......	......	Mar. 20	Apr. 1	May 28	......	......	......	...do...	
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	90	s	3.4	2 to 5	Mar. 18	......	May 23	June 7	May 29	June 20	Sept. 27	Oct. 15
Dog Ridge	O	1903	1905	92	s	2.4	2 to 5	......	......	May 24	June 9	June 1	June 14	Sept. 22	Oct. 10
Herbemont	O	1903	1905	86	s	1.2	3 to 5	......	......	May 23	June 4	May 28	June 10	Sept. 28	Oct. 11
Lenoir	O	1903	1905	96	s	3.2	2 to 6	Mar. 22	......	May 24	June 6	May 29	June 12	Sept. 22	Oct. 8
Mourvedre × Rupestris, No. 1202	O	1904	1906	89	s	3.1	2 to 4	Mar. 17	......	...do...	June 5	...do...	June 20	Sept. 28	Oct. 6
Rupestris Martin	O	1903	1905	91	s	3.3	3 to 5	......	......	May 22	June 6	May 27	June 11	Sept. 27	Oct. 11
Rupestris St. George	O	1903	1905	94	s	3.7	2 to 4	......	......	May 24	June 5	May 29	June 9	Sept. 24	Oct. 10
Salt Creek	O	1903	1905	89	s	1.7	2 to 4	Mar. 20	......	May 23	June 12	...do...	June 16	Sept. 7	Oct. 11
Taylor Narbonne	O	1904	1906	88	s	2.8	2 to 4	Mar. 24	......	...do...	June 8	...do...	June 22	Sept. 27	Oct. 10
Melon:															
Dog Ridge	F	1903	1905	90	s	3.6	4 to 6	Mar. 12	Mar. 30	May 15	May 25	May 27	June 10	Aug. 25	Sept. 20
Rupestris St. George	F	1903	1905	88	s	2.1	4 to 5	Mar. 11	Mar. 28	May 12	May 17	May 20	May 27	...do...	Sept. 19
Merlot:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 15	Apr. 1	May 26	May 30	June 5	......	Sept. 15	
Meslier:															
Own roots	Gi	1905	......	......	s	......	......	Mar. 8	Apr. 3	May 20	...do...	May 31	June 5	...do...	Sept. 22
Aramon × Rupestris Ganzin, No. 1	O	1904	......	92	s	5	2 to 3	Mar. 19	......	May 29	May 31	June 5	June 16	Sept. 25	Oct. 10
Lenoir	O	1903	1905	89	s	4	2 to 5	Mar. 16	......	May 26	...do...	May 29	June 12	Sept. 20	Oct. 8
Rupestris St. George	O	1903	1905	92	s	4.3	2 to 4	Mar. 21	......	May 21	May 30	May 26	...do...	...do...	Oct. 10
Meunier:															
Own roots	Gi	1905	......	......	s	......	......	Mar. 15	Apr. 1	May 22	May 26	...do...	June 4	Aug. 23	Aug. 23
Dog Ridge	O	1904	1906	88	s	3.7	2 to 4	Mar. 20	......	May 10	June 5	May 24	June 17	Sept. 20	Oct. 3
Lenoir	O	1903	1905	85	s	3.4	3 to 5	Mar. 16	......	May 20	May 31	May 26	June 13	Sept. 25	Oct. 18
Rupestris St. George	O	1903	1905	90	c, s	4.3	2 to 5	Mar. 17	......	May 22	...do...	May 27	June 7	Sept. 15	Oct. 8
Meyer, No. 59:															
Dog Ridge	O	1904	1906	90	s	2.5	2 to 5	Mar. 18	......	May 26	June 8	June 1	June 16	Sept. 24	Oct. 4
Lenoir	O	1904	1906	89	s	3.2	3 to 4	Mar. 20	......	May 23	June 12	May 27	June 17	Sept. 25	
Meyer, No. 60:															
Dog Ridge	O	1904	1906	93	s	3.1	3 to 5	Mar. 23	......	May 26	June 7	June 2	June 14	Sept. 23	Oct. 1
Lenoir	O	1904	1906	88	c, s	3.9	3 to 4	Mar. 20	......	May 25	June 5	May 29	June 19	Sept. 25	
Meyer, No. 65:															
Lenoir	O	1904	1906	93	s	4.3	3 to 5	Mar. 18	......	May 21	June 8	May 25	June 20	Sept. 28	Oct. 20
Meyer, No. 94:															
Dog Ridge	O	1904	1906	95	s	4.3	3 to 5	Mar. 17	......	May 22	May 31	May 27	June 12	Sept. 27	
Lenoir	O	1904	1906	91	s	5.3	3 to 4	Mar. 20	......	May 20	June 4	May 23	June 17	Sept. 26	Oct. 11
Meyer, No. 95:															
Dog Ridge	O	1904	1906	93	s	5.9	3 to 5	...do...	......	May 26	June 5	June 2	June 14	Sept. 29	Oct. 4
Lenoir	O	1904	1906	93	s	5.3	3 to 5	Mar. 17	......	May 22	...do...	May 25	June 17	Sept. 30	Oct. 7

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Meyer, No. 103:				*P. ct.*		*Lbs.*									
Lenoir	O	1904	1906	88	s	2.4		Mar. 18		May 22	June 9	May 26	June 17		
Meyer, No. 107:															
Lenoir	O	1904	1906	94	c, s	4.4	2 to 4	Mar. 16		May 19	June 4	May 23	June 8	Oct. 7	Oct. 10
Meyer, No. 116:															
Dog Ridge	O	1904	1906	94	s	3.2	3 to 5	Mar. 19		May 26	June 9	June 1	June 24	Sept. 26	
Lenoir	O	1904	1906	90	s	4.8	3 to 5	Mar. 21		May 19	June 5	May 25	June 9	do	
Meyer, No. 515:															
Dog Ridge	O	1904	1906	85	s	2.1	3 to 4	do		May 23	do	May 29	June 11	Sept. 29	Oct. 15
Lenoir	O	1904	1906	89	s	3.3				do		May 24		Sept. 26	Oct. 10
Millenium:															
Aramon × Rupestris Ganzin, No. 1	O	1904	1907	90	s	3.7	2 to 4	Mar. 16		May 21	June 2	May 26	June 12	Sept. 26	Oct. 9
Lenoir	O	1904	1906	74	s	1.2	3 to 5	Mar. 22		May 24	June 1	May 28	June 10	Sept. 28	Oct. 2
Riparia × Rupestris, No. 101	O	1904	1907	70	s	.9	2 to 5	Mar. 18		May 21	June 2	May 26	June 15	Sept. 27	Oct. 6
Riparia × Rupestris, No. 3309	O	1904	1907	61	s	1.3	3 to 5	Mar. 20		May 20	June 1	May 25	June 13	Sept. 28	
Solonis × Riparia, No. 1616	O	1904	1907	68	s	.5	3 to 4	do		May 19	May 28	May 24	June 12	Sept. 25	Oct. 5
Mission:															
Own roots	Gi	1904			c, s			Mar. 22	Mar. 27	May 26	June 4	May 30	June 9	Sept. 15	Sept. 28
Adobe Giant	F	1904	1906	90	s	4.3	3 to 4	Mar. 11	Apr. 1	May 1	May 25	May 8	May 30	Sept. 8	Sept. 21
Dog Ridge	F	1903	1905	92	c, s	4	4 to 6	Mar. 14	Mar. 30	May 15	May 28	May 28	June 7	Sept. 5	Sept. 20
Do	O	1903	1907	94	s	3.8	2 to 4	Mar. 22		May 25	June 8	May 30	June 14	Sept. 28	Oct. 5
Herbemont	F	1903	1905	82	c, s	4.8	2 to 4	Mar. 13	Apr. 1	May 20	May 30	May 29	June 6	Sept. 5	Sept. 20
Do	O	1903	1905	91	s	4.1	2 to 5	Mar. 20		May 22	June 10	May 28	June 24	Sept. 28	Oct. 11
Lenoir	F	1903	1905	84	s	1.3	3 to 6	Mar. 9	Mar. 30	May 15	May 20	May 23	May 30	Sept. 10	Sept. 18
Do	O	1903	1905	93	s	4	2 to 4	Mar. 20		May 23	June 1	May 28	June 11	Sept. 27	Oct. 10
Riparia Gloire	F	1903	1905	90	c, s	3.3	2 to 5	Mar. 12	Mar. 25	May 20	May 27	May 24	June 10	Sept. 8	Sept. 19
Rupestris Mission	F	1903	1905	87	c, s	2.4	2 to 4	Mar. 14	Mar. 26	May 13	May 23	May 21	June 28	Sept. 11	Sept. 20
Do	O	1903	1905	96	s	3.8	2 to 4	Mar. 21		May 23	June 8	May 29	June 22	Oct. 1	Oct. 1
Rupestris St. George	F	1903	1905	95	c, s	5	3 to 7	Mar. 10	Mar. 31	May 18	May 26	May 23	June 2	Sept. 10	Sept. 19
Do	O	1903	1905	95	s	5.1	2 to 5	Mar. 21		May 20	June 1	May 26	June 11	Sept. 25	Oct. 10
Salt Creek	F	1903	1905	88	c, s	2.3	2 to 4	Mar. 13	Apr. 1	May 23	May 28	May 29	June 10	Sept. 8	Sept. 20
Do	O	1903	1905	91	s	2.8	2 to 5	Mar. 22		May 21	June 10	May 26	June 20	Sept. 26	Oct. 10

Molinera Gordo:															
Lenoir	O	1904	1907	82	s	3.2	3 to 5	Mar. 23	....	May 19	...do.....	May 25	June 16	...do.....	Do.
Mondeuse:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 20	Mar. 30	May 26	May 28	May 30	June 5	Sept. 10	Sept. 24
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	93	s	4.4	3 to 6	Mar. 21	....	May 24	June 3	May 29	June 10	Sept. 27	Oct. 5
Dog Ridge	O	1903	1905	91	s	3.8	2 to 4	Mar. 22	....	May 22	June 10	May 28	June 17	Sept. 5	Oct. 10
Herbemont	O	1903	1905	83	s	3.7	2 to 6	Mar. 18	....	May 25	June 5	May 30	June 18	Sept. 27	Oct. 11
Lenoir	O	1903	1905	93	s	4.6	2 to 4	Mar. 19	....	...do.....	...do.....	...do.....	June 15	Sept. 22	Oct. 8
Mourvedre × Rupestris, No. 1202	O	1904	1906	91	c, s	3	2 to 5	Mar. 20	....	May 24	June 4	May 29	...do.....	Sept. 23	Oct. 9
Riparia × Rupestris, No. 101	O	1904	1906	89	s	2.6	3 to 6	....	....	May 23	....	May 28	....	Sept. 26	Oct. 16
Riparia × Rupestris, No. 3309	O	1904	1906	91	s	2.5	2 to 5	Mar. 17	....	May 20	June 4	May 26	June 16	Sept. 25	Oct. 11
Rupestris Martin	O	1903	1905	91	s	3.3	3 to 5	Mar. 20	....	May 21	June 5	...do.....	June 19	Sept. 28	Oct. 6
Rupestris St. George	O	1903	1905	92	s	4.1	3 to 5	...do.....	....	...do.....	...do.....	...do.....	June 20	Sept. 29	Oct. 1
Salt Creek	O	1903	1905	90	c, s	2.2	3 to 6	....	....	May 22	....	May 28	....	Sept. 27	Oct. 6
Solonis × Riparia, No. 1616	O	1904	1906	86	s	2.3	2 to 5	Mar. 17	....	May 21	June 10	May 26	June 19	Sept. 25	Oct. 5
Taylor Narbonne	O	1904	1906	87	s	4.5	2 to 6	Mar. 21	....	May 24	June 5	May 29	June 17	...do.....	Oct. 10
Moneca Nero:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 20	Mar. 30	May 28	June 6	June 2	June 11	Aug. 29	Sept. 25
Mourastel:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 14	Apr. 1	...do.....	June 3	June 1	June 10	Sept. 15	Do.
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	90	s	3.3	2 to 4	Mar. 19	....	May 25	...do.....	May 30	June 18	Sept. 29	Oct. 12
Dog Ridge	O	1904	1906	89	s	2.4	2 to 4	Mar. 20	....	...do.....	June 1	...do.....	June 15	Oct. 4	Oct. 10
Herbemont	O	1904	1909	91	s	3	2 to 5	Mar. 21	....	June 5	June 10	June 9	June 26	Oct. 5	Oct. 13
Lenoir	O	1903	1909	94	s	1	....	Mar. 24	....	June 2	June 8	June 5	June 20	....	
Riparia × Rupestris, No. 101	O	1904	1906	90	s	2.6	2 to 6	Mar. 20	....	May 24	June 5	May 29	June 18	Sept. 24	Oct. 15
Riparia × Rupestris, No. 3309	O	1904	1906	92	s	2.8	3 to 6	Mar. 18	....	...do.....	...do.....	...do.....	June 20	Sept. 25	Oct. 11
Solonis × Riparia, No. 1616	O	1904	1906	88	s	2.1	2 to 5	...do.....	....	May 26	...do.....	June 2	June 19	Sept. 29	Oct. 10
Taylor Narbonne	O	1904	1906	90	s	3.4	3 to 5	...do.....	....	...do.....	June 3	...do.....	...do.....	Sept. 26	Oct. 5
Mourisco Bianca:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 15	Mar. 26	...do.....	June 1	May 31	June 6	Sept. 18	Sept. 25
Dog Ridge	O	1904	1906	93	s	3.7	2 to 5	Mar. 18	....	May 19	...do.....	May 24	June 12	Sept. 30	Oct. 5
Lenoir	O	1903	1905	93	s	3.2	3 to 5	Mar. 20	....	May 20	June 3	May 25	June 13	Sept. 28	Sept. 30
Rupestris St. George	O	1903	1905	93	s	4.6	2 to 5	Mar. 17	....	May 21	June 1	May 26	...do.....	Sept. 25	Do.
Taylor Narbonne	O	1904	1906	93	s	2.8	2 to 4	Mar. 20	....	May 25	June 7	May 30	June 11	Sept. 20	Oct. 4
Mourisco Preto:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 18	Mar. 25	May 26	May 30	May 31	June 3	Aug. 29	Sept. 20
Dog Ridge	O	1904	1906	95	c, s	6.1	2 to 4	Mar. 20	....	May 27	June 3	June 2	June 15	Sept. 25	Oct. 5
Lenoir	O	1903	1905	95	c, s	4.7	2 to 4	Mar. 16	....	May 20	May 31	May 25	June 10	...do.....	Oct. 6
Rupestris St. George	O	1903	1905	93	s	5.5	2 to 4	...do.....	....	May 26	...do.....	May 30	June 15	Sept. 30	Oct. 8
Muscadelle du Bordelais:															
Adobe Giant	F	1904	1906	82	s	1	3 to 5	Mar. 13	Mar. 27	May 11	May 16	May 21	May 25	Aug. 20	Sept. 20
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	90	s	3.4	2 to 6	Mar. 6	Mar. 25	May 12	...do.....	May 20	May 26	Aug. 3	Do.
Lenoir	F	1903	1905	87	s	1.4	3 to 6	Mar. 7	Mar. 30	May 10	May 15	May 19	May 25	Aug. 5	Sept. 10
Mourvedre × Rupestris, No. 1202	F	1904	1906	90	c, s	3	2 to 6	Mar. 18	Mar. 27	May 14	May 19	May 20	May 27	Aug. 1	Sept. 20
Riparia Gloire	F	1903	1904	88	c, s	3.2	2 to 5	Mar. 11	Mar. 25	May 17	...do.....	May 23	...do.....	Aug. 15	Sept. 4
Riparia × Rupestris, No. 101	F	1904	1906	88	c, s	2.4	2 to 5	Mar. 8	Mar. 28	May 10	May 17	May 20	May 25	Aug. 10	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	89	s	3.3	2 to 6	Mar. 12	Apr. 1	...do.....	May 16	...do.....	...do.....	Aug. 5	Do.
Rupestris St. George	F	1903	1905	86	c, s	2.4	2 to 5	...do.....	Mar. 30	...do.....	May 15	May 15	...do.....	Aug. 3	Sept. 19
Solonis × Riparia, No. 1616	F	1904	1906	86	s	1.7	3 to 6	Mar. 7	Mar. 28	May 14	May 16	May 20	May 24	Aug. 1	Sept. 3
Taylor Narbonne	F	1904	1905	88	s	2.3	2 to 5	Mar. 6	Mar. 25	May 12	...do.....	...do.....	May 31	Aug. 5	Sept. 20

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Muscat (S. P. I. No. 3063):				*P. ct.*		*Lbs.*									
Own roots	O	1904			s	.2	3 to 4	Mar. 20		May 12	June 12	May 17	June 16	Oct. 10	
Muscat Albardiens:															
Own roots	Gi	1905			s			...do	Mar. 28	...do	May 29	May 18	June 4	Aug. 27	Sept. 25
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	87	s	2.1	2 to 6	Mar. 22	Apr. 1	May 20	May 23	May 27	May 31	Aug. 20	Sept. 2
Lenoir	F	1903	1905	87	c, s	1.7	2 to 6	Mar. 13	Mar. 30	May 12	May 19	May 23	May 27	Aug. 23	Sept. 15
Mourvedre × Rupestris, No. 1202	F	1904	1906	92	c, s	4.8	2 to 6	Mar. 14	...do	May 15	May 20	May 21	June 1	Aug. 18	Sept. 20
Riparia Gloire	F	1903	1905	84	s	2.6	2 to 5	Mar. 20	Apr. 1	May 13	May 18	May 22	May 26	Aug. 20	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	87	s	2.7	2 to 5	Mar. 13	Mar. 30	May 16	May 20	May 24	...do	...do	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	91	c, s	5.7	2 to 5	Mar. 23	Apr. 1	May 12	May 23	May 21	May 28	Aug. 8	Do.
Rupestris St. George	F	1903	1905	92	s	4.3	2 to 5	Mar. 24	...do	May 14	May 16	...do	May 29	Aug. 20	Sept. 19
Solonis × Riparia, No. 1616	F	1904	1906	85	s	1.4	3 to 5	Mar. 21	Mar. 30	May 12	May 20	May 25	May 27	Aug. 18	Sept. 2
Taylor Narbonne	F	1904	1906	88	s	3	3 to 6	Mar. 12	...do	May 13	...do	May 24	May 26	Aug. 15	Sept. 20
Muscat Bonod:															
Berlandieri × Riparia, No. 420A	F	1909	1909		s	1		Mar. 22	Apr. 8	May 18	May 22	May 29		Sept. 15	
De Grasset	F	1909	1909	80	s	2		Mar. 26		May 24				Oct. 17	
Lenoir	O	1904	1907	79	s	1.7	2 to 5	...do		May 23	June 10	May 28	June 25	Sept. 28	Oct. 25
Riparia × Rupestris, No. 101	F	1907	1907	82	s	1.7	3 to 5	Mar. 24	Apr. 8	May 18	May 24	May 29		Oct. 17	
Riparia × Rupestris, No. 3309	F	1907	1907	89	s	3.5	3 to 5	Mar. 25	Apr. 5	May 20	...do	June 3		...do	
Rupestris St. George	F	1907	1907	87	s	2	2 to 5	Mar. 24	Apr. 8	May 26	May 26	June 2		Sept. 15	
Solonis Robusta	F	1907	1907	90	s	3.3	2 to 5	Mar. 21	Apr. 5	May 16	...do	May 30		Sept. 21	
Valencia	F	1907	1907	92	s	4	2 to 5	Mar. 23		May 28				Oct. 17	
Muscat Capusines:															
Own roots	Gi	1905			c, s			Mar. 18	Mar. 27	May 26	May 27	May 30		Sept. 10	
Dog Ridge	O	1904	1906	79	s	2.8	2 to 5	Mar. 26		...do	June 11	...do	June 15	Sept. 20	
Lenoir	O	1903	1905	85	s	2.1	2 to 4	Mar. 18		May 21	May 31	May 26	June 14	Sept. 9	Sept. 21
Rupestris St. George	O	1903	1905	85	s	3.4	2 to 5	...do		May 26	June 3	June 1	...do	...do	Sept. 23
Muscateller:															
Own roots	Gi	1905			c, s			Mar. 17	Mar. 28	...do	...do	June 8		Aug. 27	Sept. 20
Dog Ridge	F	1903	1906	89	c, s	2.4	3 to 5	Mar. 8	Mar. 26	May 14	May 20	May 25	May 29	Aug. 5	Do.
Lenoir	F	1903	1905	87	s	1.2	3 to 6	Mar. 12	Mar. 25	May 10	May 14	May 16	May 24	Aug. 24	Sept. 10
Riparia Gloire	F	1903	1905	76	s	1.2	3 to 5	Mar. 10	...do	May 16	May 20	May 24	May 29	Aug. 21	Sept. 19
Rupestris St. George	F	1903	1905	89	c, s	2.3	3 to 5	Mar. 13	...do	May 8	May 18	May 14	May 24	Aug. 20	Do.

Muscat Gros Noir Hatif:															
Own roots	Gi	1905			s			Mar. 18	Mar. 27	May 14	May 27	May 20	June 1	Aug. 27	Sept. 23
Dog Ridge	O	1904	1906	90	s	2.9	3 to 4	Mar. 20		May 25	May 31	May 30	June 10	Sept. 15	Oct. 10
Lenoir	O	1903	1905	84	s	2.2	2 to 5	Mar. 17		May 22	June 1	May 28	June 12	do	Oct. 6
Rupestris St. George	O	1903	1905	86	s	2.9	3 to 6	Mar. 18		do	do	do	June 14	Sept. 10	Sept. 26
Taylor Narbonne	O	1904	1906	84	s	2.6	1 to 4	do		May 24	do	May 29	do	Sept. 15	Oct. 4
Muscat Hamburg:															
Own roots	Gi	1905			c, s			do	Mar. 28	May 26	May 27	May 30	June 3	Aug. 27	Sept. 23
Aramon × Rupestris Ganzin, No. 1	F	1907	1907	86	s	3	2 to 4	Mar. 24	Apr. 1	May 16	May 23	May 27		Aug. 20	
Dog Ridge	O	1904	1906	87	s	3.9	2 to 5	Mar. 22		May 25	June 5	May 30	June 17	Sept. 25	Oct. 4
Lenoir	O	1903	1905	83	s	2	3 to 5	Mar. 24		May 30	June 1	June 6	June 15	do	Oct. 6
Monticola × Rupestris	F	1907	1907	88	s	2.2	3 to 4	Mar. 26	Apr. 1	May 15	May 22	May 28		Aug. 24	
Riparia × Rupestris, No. 3309	F	1907	1907	83	s	1.6		Mar. 23	Apr. 2	May 18	do	May 27		Aug. 15	Aug. 25
Rupestris St. George	O	1903	1905	90	s	3.9	2 to 6	Mat. 17		May 19	June 3	May 24	June 16	Sept. 15	Sept. 30
Rupestris × Berlandieri, No. 219A	F	1907	1907	84	s	1.8	3 to 5	Mar. 20	Apr. 2	May 17	May 22	May 29		Aug. 15	Aug. 25
Taylor Narbonne	O	1904	1906	80	s	2.2	3 to 6	Mar. 19		May 21	June 2	May 27	June 17	Sept. 25	Oct. 4
Muscat Hamburg Noir d'Hongrie:															
Own roots	Gi	1905			s			Mar. 26	Apr. 1	May 26	June 1	May 30	June 6	Aug. 27	Sept. 20
Muscat Noir d'Hongrie:															
Lenoir	F	1903	1905	83	s	1.7	2 to 5	Mar. 14	Mar. 30	May 14	May 18	May 18	May 26	Aug. 24	Sept. 18
Do	O	1903	1905	90	s	2.8	2 to 5	Mar. 22		May 24	June 4	May 29	June 18	Sept. 25	Oct. 6
Riparia Gloire	F	1903	1905	90	c, s	3.6	2 to 5	Mar. 10	Apr. 1	May 12	May 18	May 22	May 29	Aug. 20	Sept. 19
Rupestris St. George	F	1903	1905	89	s	3.7	2 to 5	Mar. 14	Mar. 25	May 10	May 16	May 19	May 25	Aug. 22	Do.
Do	O	1903	1905	90	s	5.4	2 to 5	Mar. 16		May 22	June 1	May 27	June 14	Sept. 15	Oct. 8
Muscat Noir Precoce:															
Aramon × Rupestris Ganzin, No. 2	F	1907	1907	91	s	3.5	3 to 6	Mar. 21	Apr. 1	May 16	May 23	May 26		Aug. 25	Aug. 29
Dog Ridge	O	1904	1906	81	s	.9	2 to 4	Mar. 22		May 23	May 31	May 29	June 13	Sept. 28	Oct. 8
Lenoir	O	1903	1905	88	s	2.9	2 to 4	Mar. 18		May 26	June 3	June 1	June 10	do	Do.
Lukfata	F	1907	1907	93	s	5	3 to 5	Mar. 25	Apr. 1	May 16	May. 22	May 29		Aug. 20	Aug. 25
Monticola × Riparia, No. 18804	F	1907	1907	92	c, s	6.3	3 to 5	Mar. 21	do	do	do	do		do	
Rupestris St. George	O	1903	1905	91	s	4	2 to 4	Mar. 20		May 24	May 30	do	June 10	Sept. 20	Sept. 30
Rupestris × Berlandieri, No. 219A	F	1907	1907	88	s	2.8	3 to 6	do	Apr. 1	May 15	May 22	May 27		Aug. 20	Aug. 24
Solonis × Othello	F	1907	1907	89	s	3.5	3 to 6	Mar. 25		May 22				Aug. 29	
Taylor Narbonne	O	1904	1906	85	s	2	2 to 5	Mar. 22		May 23	June 4	May 28	June 16	Sept. 25	Oct. 8
Muscat Rose:															
Dog Ridge	F	1903	1906	88	c, s	2.8	3 to 7	Mar. 7	Mar. 30	May 13	May 18	May 24	May 28	Aug. 26	Sept. 20
Lenoir	F	1903	1905	82	s	1	2 to 6	Mar. 6	Mar. 25	May 12	do	May 21	May 25	Aug. 5	Sept. 10
Riparia Gloire	F	1903	1905	88	c, s	3.9	2 to 6	Mar. 12	do	May 15	May 16	May 20	May 31	Aug. 1	Sept. 19
Rupestris St. George	F	1903	1905	86	c, s	3.3	3 to 6	do	Mar. 28	May 12	May 15	May 18	May 27	Aug. 10	Do.
Muscat Rouge de Madre:															
Lenoir	F	1903	1905	76	s	1	3 to 5	Mar. 16	Mar. 30	May 11	do	May 19	May 24		
Riparia Gloire	F	1903	1905	86	c, s	3.3	2 to 6	Mar. 10	Apr. 1	May 10	May 21	May 24	May 26	Aug. 5	Sept. 19
Rupestris St. George	F	1903	1905	88	c, s	4.3	2 to 5	Mar. 12	Mar. 28	May 12	May 15	May 18	May 25	Aug. 24	Do.
Muscat Talabot:															
Own roots	Gi	1905			s			Mar. 15	Apr. 3	May 26	May 28	June 1		Sept. 18	
Lenoir	O	1903	1905	86	s	3.3	3 to 6	do		May 23	June 5	May 27	June 18	Sept. 9	Sept. 25
Rupestris St. George	O	1903	1907	86	s	4.5		Mar. 23		May 25	do	May 30	June 14	do	Do.
Napoleon:															
Own roots	Gi	1904			s			do	Apr. 1	May 24	June 6	May 29	June 13	Sept. 10	Sept. 22

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Nasa Valentiana:				*P. ct.*		*Lbs.*									
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 8	Mar. 30	May 25	May 30	June 1	June 3	Sept. 21	
Rupestris St. George	F	1903	1905	83	s	1.8	2 to 5	Mar. 3	Mar. 15	May 10	May 15	May 20	May 28	Aug. 25	Sept. 19
Nebbiolo:															
Own roots	Gi	1905	....	......	s	....	....	Mar. 15	Apr. 3	May 22	June 1	May 27	June 5	Sept. 5	Sept. 24
Dog Ridge	O	1904	1906	93	s	4.4	2 to 4	Mar. 20	....	May 25	June 2	May 29	June 12	Sept. 25	Oct. 4
Lenoir	O	1904	1906	90	s	3.4	2 to 4	Mar. 19	....	May 24	June 5	May 28	June 17	...do.....	Oct. 8
Rupestris St. George	O	1903	1905	84	s	2	2 to 4	Mar. 24	....	May 20	June 3	May 26	June 15	Sept. 27	Sept. 30
Nebbiolo Bourgu:															
Dog Ridge	O	1904	1906	93	s	4.1	3 to 5	Mar. 17	....	May 22	June 5	May 28	June 19	Sept. 23	Oct. 8
Lenoir	O	1903	1905	88	s	3.8	2 to 5	Mar. 14	....	May 19	May 30	May 23	June 14	Sept. 25	
Rupestris St. George	O	1903	1905	88	s	4.1	2 to 4	Mar. 18	....	May 24	May 31	May 30	June 10	Sept. 24	Sept. 30
Taylor Narbonne	O	1904	1907	81	s	1.6	4 to 5	Mar. 30	....	May 19	May 28	May 24	June 9	Sept. 23	Oct. 2
Nebbiolo Fino:															
Dog Ridge	O	1904	1906	89	s	4	3 to 5	Mar. 18	....	...do.....	June 1	May 25	June 15	...do.....	Oct. 4
Lenoir	O	1903	1905	86	s	2.8	3 to 5	Mar. 16	....	...do.....	...do.....	May 23	June 13	...do.....	Sept. 28
Rupestris St. George	O	1903	1905	84	s	2.8	2 to 4	Mar. 20	....	May 24	May 25	May 29	June 2	...do.....	Sept. 30
Taylor Narbonne	O	1904	1906	78	s	1.2	3 to 4	Mar. 21	....	May 19	May 30	May 24	June 10	....	
Negrara di Gattinara:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 14	Apr. 1	May 22	...do.....	May 27	June 5	Sept. 16	Sept. 22
Negro Amaro:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 20	Mar. 29	May 24	June 3	May 30	June 10	Aug. 27	Sept. 23
Neiretta di Costilla:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 10	Mar. 30	May 22	May 28	May 27	June 3	Sept. 23	Sept. 25
Ocru di Boe:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 17	Mar. 28	May 28	....	....	....	Sept. 15	Sept. 21
Ohanez:															
Lenoir	O	1906	1909	93	s	1.2	....	Mar. 18	....	June 5	June 14	June 9	June 20	....	
Olivette Blanche:															
Adobe Giant	F	1907	1907	98	c, s	7.7	2 to 5	Mar. 21	Apr. 2	May 19	May 23	May 29	....	Sept. 21	
Lenoir	O	1907	1907	88	s	2.8	2 to 5	Mar. 20	....	May 20	June 8	May 26	June 20	Sept. 30	Oct. 10
Riparia à Grandes Feuilles	F	1907	1907	96	c, s	6.6	3 to 5	Mar. 12	Apr. 1	May 21	May 23	June 1	....	Aug. 25	Sept. 21
Riparia × Rupestris, No. 101	F	1907	1907	97	c, s	6.2	3 to 5	Mar. 22	...do.....	May 19	May 24	May 30	....	Aug. 26	

Olivette Chaptal:															
Lenoir	O	1904	1907	83	s	2.1	2 to 5	Mar. 24	....	May 21	June 10	May 26	June 17	Sept. 26	Oct. 26
Solonis Robusta	F	1907	1907	92	s	8.1	3 to 5	...do.....	Apr. 1	...do.....	May 22	May 29	....	Sept. 21	
Olivette Noir:															
Lenoir	O	1904	1907	81	s	2	3 to 6	Mar. 26	....	May 23	June 10	May 27	June 25	Sept. 27	Oct. 20
Mourvedre × Rupestris, No. 1202	F	1907	1907	91	c, s	6.3	3 to 5	Mar. 21	Apr. 5	May 20	May 25	May 29	....	Sept. 15	
Riparia × Rupestris, No. 3309	F	1907	1907	94	c, s	7.3	....	Mar. 23	...do.....	May 21	...do.....	May 30	....	Sept. 17	
Solonis × Othello, No. 1613	F	1907	1907	95	c, s	8.6	2 to 5	Mar. 25	...do.....	May 20	...do.....	May 31	....	Sept. 15	
Olivette Rose:															
Lenoir	O	1904	1907	89	s	3.1	2 to 4	Mar. 19	....	May 21	June 5	May 29	June 20	Sept. 27	Oct. 16
Opiman:															
Lenoir	O	1904	1907	87	s	2.2	3 to 5	Mar. 20	....	May 19	...do.....	May 24	June 17	....	
Orleans:															
Own roots	Gi	1904	....	......	c, s	....	....	...do.....	Mar. 26	May 26	June 3	May 31	June 8	Aug. 29	Sept. 25
Pagadebito:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 10	Mar. 27	...do.....	June 8	...do.....	June 14	Sept. 20	Do.
Dog Ridge	O	1904	1906	94	s	5.6	1 to 4	Mar. 20	....	May 25	...do.....	May 30	June 20	Sept. 28	Oct. 10
Lenoir	O	1903	1905	90	c, s	4.1	3 to 5	Mar. 16	....	May 26	June 5	June 1	June 19	Sept. 27	Oct. 8
Rupestris St. George	O	1905	1905	94	s	5.8	3 to 5	Mar. 17	....	...do.....	June 1	...do.....	June 13	...do.....	Oct. 10
Taylor Narbonne	O	1904	1906	83	s	2	2 to 4	Mar. 18	....	May 19	...do.....	May 25	June 11	Sept. 28	Do.
Palarusa:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 26	Mar. 28	May 26	June 10	May 31	June 15	Sept. 20	Sept. 30
Panariti:															
Adobe Giant	F	1904	1906	94	c, s	10.1	2 to 4	Mar. 7	...do.....	May 14	May 19	May 24	June 1	Aug. 3	
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	95	c, s	6.5	2 to 4	Mar. 10	Apr. 1	May 13	May 22	...do.....	June 27	July 28	Aug. 1
Dog Ridge	F	1903	1905	91	s	3.2	2 to 4	Mar. 7	Mar. 27	...do.....	...do.....	May 26	May 28	July 25	Do.
Herbemont	F	1903	1905	76	s	1.7	2 to 5	...do.....	Mar. 30	May 12	May 18	May 29	...do.....	....	
Lenoir	F	1903	1905	90	c, s	1.7	2 to 4	Mar. 8	Mar. 25	May 11	...do.....	May 22	May 21	July 25	
Mourvedre × Rupestris, No. 1202	F	1904	1906	94	s	5.5	3 to 5	Mar. 5	Apr. 1	May 15	May 20	May 25	June 4	...do.....	Aug. 8
Riparia Gloire	F	1903	1905	94	c, s	5.5	2 to 5	...do.....	Mar. 25	May 10	May 18	May 23	May 25	...do.....	Aug. 3
Riparia × Rupestris, No. 101	F	1904	1906	73	s	1.2	....	...do.....	...do.....	May 14	May 20	May 25	May 29	....	
Riparia × Rupestris, No. 3309	F	1904	1906	94	c, s	5.6	2 to 4	Mar. 8	Mar. 27	May 12	...do.....	May 21	May 25	July 25	Aug. 1
Rupestris Martin	F	1903	1905	86	s	1.9	....	Mar. 12	Mar. 25	May 13	May 16	May 25	May 27	....	
Rupestris St. George	F	1903	1905	96	c, s	6.1	3 to 6	Mar. 11	...do.....	...do.....	May 18	May 23	May 30	July 25	Do.
Salt Creek	F	1903	1905	90	c, s	5.1	2 to 5	Mar. 9	...do.....	May 12	...do.....	...do.....	May 26	...do.....	
Solonis × Riparia, No. 1616	F	1904	1906	90	c, s	4.8	3 to 5	Mar. 7	...do.....	...do.....	May 20	May 25	May 27	...do.....	Do.
Taylor Narbonne	F	1904	1906	92	c, s	3.4	2 to 4	...do.....	Mar. 28	May 13	...do.....	...do.....	May 28	July 28	
Parc de Versailles:															
Adobe Giant	F	1904	1906	93	c, s	5.5	2 to 5	Mar. 14	Mar. 25	May 12	May 23	May 22	...do.....	Aug. 20	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	91	c, s	6.1	2 to 5	Mar. 6	...do.....	May 11	May 16	May 21	May 27	Aug. 5	Sept. 20
Dog Ridge	F	1904	1906	95	s	7.3	2 to 5	Mar. 7	Mar. 30	May 12	May 25	May 24	May 30	...do.....	Do.
Lenoir	F	1903	1905	90	c, s	3.2	2 to 5	Mar. 5	Mar. 15	May 18	May 20	May 22	May 25	Aug. 25	Sept. 19
Mourvedre × Rupestris, No. 1202	F	1904	1906	81	s	1.8	3 to 5	Mar. 4	...do.....	May 15	May 22	June 1	June 5	...do.....	Sept. 20
Pouroy	F	1907	1907	93	c, s	10.5	3 to 5	Mar. 21	....	May 21	....	....	....	Sept. 21	
Riparia Gloire	F	1903	1905	91	c, s	6.7	2 to 4	Mar. 8	Mar. 20	May 10	May 20	May 20	May 26	Aug. 5	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	80	s	1.4	3 to 5	Mar. 20	Mar. 29	...do.....	May 15	May 24	May 25	....	
Riparia × Rupestris, No. 3309	F	1904	1906	94	c, s	5.4	2 to 5	Mar. 8	Mar. 28	May 12	May 25	May 27	May 30	Aug. 10	Sept. 20
Rupestris Metallica	F	1907	1907	92	s	5	3 to 6	Mar. 20	....	May 21	....	....	....	Oct. 17	
Rupestris St. George	F	1903	1905	96	c, s	7.6	2 to 5	Mar. 10	Mar. 15	May 8	May 17	May 20	May 23	Aug. 20	Sept. 19
Solonis × Riparia, No. 1616	F	1904	1906	84	s	2.8	4 to 5	Mar. 6	Mar. 25	May 11	May 20	May 25	May 28	Aug. 25	Sept. 20
Taylor Narbonne	F	1904	1906	96	c, s	6	3 to 6	Mar. 5	...do.....	...do.....	May 23	May 24	...do.....	Aug. 5	Do.

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pedro Ximines:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904			c, s			Mar. 12	Mar. 28	May 22	May 30	May 29	June 6	Aug. 29	Sept. 25
Adobe Giant	F	1904	1906	84	s	.8	2 to 4	Mar. 7	Mar. 26	May 13	May 20	May 24	May 26	Sept. 15	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	88	c, s	2.7	3 to 5	Mar. 5	Mar. 30	May 20	May 28	May 25	June 4	Sept. 8	Sept. 15
Dog Ridge	F	1903	1905	90	s	2.4	3 to 5	Mar. 13	Mar. 26	May 14	May 22	May 27	May 30	Sept. 10	Sept. 20
Herbemont	F	1903	1905	72	s	1.1	3 to 5	...do	Mar. 25	May 15	May 20	May 24	June 1	Sept. 13	Do.
Lenoir	F	1903	1905	88	s	.9	2 to 5	...do	Mar. 27	...do	...do	May 22	May 29	Sept. 15	Sept. 19
Mourvedre × Rupestris, No. 1202	F	1904	1906	94	c, s	3.7	3 to 6	...do	Mar. 26	May 14	...do	May 24	May 26	Sept. 10	Sept. 20
Riparia Gloire	F	1903	1905	89	c, s	3	2 to 5	Mar. 8	Mar. 20	May 15	May 28	May 21	June 5	...do	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	94	c, s	3.8	4 to 7	Mar. 12	Mar. 26	May 14	May 20	May 22	May 26	Sept. 5	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	95	c, s	3.6	3 to 5	Mar. 11	Mar. 25	May 11	...do	May 25	...do	Sept. 8	Do.
Rupestris Martin	F	1903	1905	84	s	1.5	2 to 5	Mar. 13	Mar. 28	May 15	May 18	May 23	May 25	Sept. 10	Sept. 16
Rupestris St. George	F	1903	1905	93	c, s	3.2	4 to 6	...do	Mar. 20	May 12	May 16	May 21	May 30	Sept. 8	Sept. 19
Salt Creek	F	1903	1905	81	s	1.3	3 to 5	Mar. 10	Mar. 30	May 15	May 23	May 23	May 28	Sept. 10	Sept. 20
Solonis × Riparia, No. 1616	F	1904	1906	92	c, s	2.9	3 to 5	Mar. 6	Apr. 1	...do	...do	May 25	...do	...do	Do.
Taylor Narbonne	F	1904	1906	90	c, s	2.2	3 to 5	Mar. 11	Mar. 25	May 14	May 20	May 23	May 27	Sept. 15	Do.
Perle Blanche:															
Lenoir	O	1903	1905	89	s	3.4	3 to 6			May 20	June 5	May 26	June 20	Sept. 23	Sept. 28
Rupestris St. George	O	1903	1905	91	s	4.4	2 to 4	Mar. 19		May 23	June 4	May 27	June 18	...do	Oct. 15
Lenoir	O	1904	1907	80	s	1.2	2 to 6	Mar. 21		May 18	June 3	May 24	June 15	Sept. 25	
Perruno:															
Own roots	Gi	1904			s			Mar. 14	Mar. 29	May 24	June 4	May 29	June 10	Sept. 10	Sept. 23
Persian, No. 21:															
Own roots	Gi	1904			c, s			Mar. 18	Mar. 30	May 30				Sept. 20	
Persian, No. 25:															
Own roots	Gi	1904			c, s			Mar. 16	Mar. 25	...do	June 3	June 10		Sept. 24	
Persian, No. 26:															
Own roots	Gi	1904			c, s			Mar. 20	Mar. 28	June 3	June 5	June 11		...do	
Peru:															
Lenoir	O	1903	1909	92	s	3.2	3 to 4	Mar. 26		June 9	June 10	June 13	June 27	Sept. 25	Oct. 8

Petit Syrah:															
Own roots	Gi	1907			s			Mar. 27	Apr. 1	May 30					
Adobe Giant	G	1904	1909	83	s	1.2		Mar. 7	Mar. 29	May 29		June 1		Sept. 20	
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554-5)	G	1904	1909	90	s	4.2		Mar. 9	Apr. 1	May 25	May 27	June 10		Sept. 28	Do.
Aramon × Rupestris Ganzin, No. 1	G	1904	1909	95	s	4.1		Mar. 6	Apr. 2	May 28				Sept. 23	Do.
Do	O	1904	1906	85	s	3.7	2 to 5	Mar. 18		May 20	June 1	May 26	June 12	Sept. 24	Oct. 6
Aramon × Rupestris Ganzin, No. 2	G	1904	1909	95	s	3.5		Mar. 8	Mar. 30	May 27	June 3	June 12		Sept. 20	Oct. 4
Aramon × Rupestris Ganzin, No. 9	G	1904	1909	60	s	.5		Mar. 2		June 15				Oct. 7	
Australis	G	1904	1909	91	s	1.1		Mar. 10	Apr. 1	May 27				Sept. 22	Oct. 8
Berlandieri, No. 1	G	1904	1909	78	s	1.5		Mar. 6	do.	June 3	June 18	July 2		Sept. 26	Oct. 7
Berlandieri, No. 2	G	1904	1909	86	s	1		Mar. 10	Mar. 27	June 1				Sept. 28	Oct. 1
Berlandieri Lafont, No. 9	G	1904	1909	91	s	.5		Mar. 5	Mar. 30	do.				do.	Do.
Berlandieri × Riparia, No. 34EM	G	1904	1909	90	s	3.5		Mar. 2	Apr. 1	May 28				Sept. 30	Oct. 8
Berlandieri × Riparia, No. 157-11	G	1904	1909	82	s	1.8		Mar. 4	Mar. 27	do.				do.	Do.
Berlandieri × Riparia, No. 420A	G	1904	1909	72	s	.5		Mar. 6	Mar. 28					Sept. 20	
Do	O	1907	1909	76	s	1.1	2 to 4	Mar. 21		June 1	June 4	June 8	June 13	do.	Do.
Bourisquou × Rupestris, No. 109-4	G	1904	1909	88	s	3		Mar. 5	Apr. 1	May 27		June 3		do.	Oct. 12
(Bourisquou × Rupestris, No. 601) × Calcicola, No. 13205	G	1907	1909	86	s	1.7		do.	Apr. 3	May 30				Sept. 26	Oct. 7
Bourisquou × Rupestris, No. 3907	G	1904	1909	97	s	3.5		Mar. 7	Apr. 1	June 2				Sept. 20	Do.
Cabernet × Berlandieri, No. 333	G	1904	1909	90	s	.7		Mar. 8	Mar. 28	June 1	June 20	June 4		Sept. 26	Oct. 8
Cabernet × Rupestris Ganzin, No. 33A	G	1904	1909	90	s	2.2		Mar. 6	Apr. 3					do.	Do.
Captain	G	1908	1909	86	s	2		Mar. 3	Apr. 1	May 23	June 1	June 9		Oct. 10	
Chasselas × Berlandieri, No. 41B	G	1904	1909	91	s	2		Mar. 2	Apr. 2	June 1	June 15	June 25		Sept. 26	Oct. 7
Constantia	O	1907	1909	87	s	2.3	2 to 4	Mar. 20		June 2	do.	June 7	June 20	Oct. 10	
Dog Ridge	G	1904	1909	95	s	3		Mar. 6	Mar. 30	June 1				Sept. 26	Oct. 8
Do	O	1903	1905	88	s	2.9	3 to 5	Mar. 19		May 19	June 5	May 25	June 12	Sept. 27	Oct. 15
Herbemont	O	1903	1905	86	s	2.8	2 to 5	Mar. 17		May 25	do.	May 30	June 17	Sept. 25	Oct. 6
Hotporup	G	1904	1909	93	s	2.2		Mar. 3	Mar. 10	May 20	June 4	June 12		Sept. 20	Oct. 8
Joly	G	1907	1909	80	s	1.1		Mar. 1	Apr. 3	June 1				do.	Do.
Judge	G	1907	1909	70	s	.4		Mar. 4	Apr. 1	do.				do.	Do.
Lenoir	O	1903	1905	89	s	2.9	3 to 5	Mar. 20		May 23	June 5	May 29	June 11	Sept. 25	Oct. 6
Monticola × Riparia, No. 554	G	1904	1909	85	s	1.5		Mar. 6	Apr. 1	May 25	June 3	June 10		do.	Do.
Monticola × Riparia, No. 18808	O	1907	1909	87	s	2.2		Mar. 22		June 2	do.	June 6	June 17	Oct. 10	
Monticola × Rupestris	G	1906	1909	85	s	1.2		Mar. 10	Apr. 1	May 30				Sept. 20	Do.
Motley	G	1904	1909	86	s	.4		Mar. 8	do.	May 28	June 1	June 12		do.	Oct. 10
Mourvedre × Rupestris, No. 1202	G	1904	1909	95	s	3.2		Mar. 6	do.	do.	do.	June 17		do.	Oct. 7
Do	O	1904	1909	92	s	2	3 to 4	Mar. 21		June 12		June 25		Oct. 5	
Mourvedre × Rupestris, No. 1203	G	1905	1909	78	s	.6		Mar. 4		June 1		June 18		Sept. 25	
Pardes	G	1907	1909	90	s	2.2		Mar. 6	Mar. 20	May 25	May 30	June 9		Sept. 20	Oct. 4
Riparia du Colorado	G	1904	1909	86	s	1		Mar. 10	do.	May 28				Sept. 26	Oct. 8
Riparia × (Cordifolia × Rupestris) No. 106-8	G	1904	1909	89	s	3.5		do.	Mar. 30	do.				do.	Do.
Riparia × Rupestris, No. 101	G	1904	1909	94	s	2.5		Mar. 6	Apr. 2	May 30				Sept. 25	Do.
Do	O	1904	1906	85	s	2	3 to 5	Mar. 21		May 20	June 7	May 26	June 20	Sept. 27	Oct. 6
Riparia × Rupestris, No. 101-14	G	1904	1909	90	s	1.7		Mar. 10	Mar. 30	June 1		June 16		Sept. 26	Oct. 8
Do	O	1907	1909	72	s	.5		Mar. 19		June 2	June 10	June 7	June 25		

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Petit Syrah—Continued.				*P. ct.*		*Lbs.*									
Riparia × Rupestris, No. 108–103	G	1905	1909	75	S	1.2		Mar. 2	Apr. 3	June 5				Sept. 26	
Riparia × Rupestris, No. 3306	G	1904	1909	98	S	3.2		Mar. 9	Mar. 27	May 27				do	Oct. 8
Do	O	1907	1909	88	S	1.5	2 to 4	Mar. 19		May 30	June 2	June 6	June 15	Sept. 25	Oct. 1
Riparia × Rupestris, No. 3309	G	1904	1909	93	S	3.7		Mar. 10	Apr. 3	June 1				Sept. 26	Oct. 7
Do	O	1904	1906	91	S	2	2 to 5	Mar. 17		May 21	June 7	May 30	June 22	Sept. 25	Oct. 11
Rupestris des Caussettes	G	1904	1909	89	S	2.7		Mar. 8	Mar. 30	May 28	June 1	June 9		Sept. 26	Oct. 8
Rupestris Martin	G	1904	1909	94	S	2.6		Mar. 11	Mar. 27	June 1				Sept. 28	Do.
Do	O	1903	1905	89	S	3.1	2 to 5	Mar. 18		May 24	June 3	May 29	June 20	Sept. 24	Oct. 13
Rupestris Metallica	G	1904	1909	91	S	1.2		Mar. 6	Apr. 3	May 29				Sept. 25	Oct. 8
Do	O	1904	1909	84	S	1.2	2 to 3	Mar. 20		June 3	June 5	June 9	June 2	Oct. 1	
Rupestris Mission	G	1904	1909	86	S	1.2		Mar. 9	Mar. 27	May 27				Sept. 28	Oct. 8
Do	O	1907	1909	88	S	.8		Mar. 5	Apr. 1	May 29				Sept. 26	Do.
Rupestris St. George	G	1904	1909	88	S	3.2		Mar. 1	Mar. 30	June 4		June 10		Sept. 22	Oct. 4
Do	O	1903	1905	90	S	3.2	2 to 5	Mar. 20		May 21	May 31	May 29	June 17	Sept. 27	Oct. 8
Rupestris × Berlandieri, No. 219A	G	1904	1909	92	S	1.6		Mar. 7	Apr. 3	June 1		June 14		Sept. 25	Oct. 10
Rupestris × Berlandieri, No. 301A	G	1904	1909	87	S	2.8		Mar. 8	Mar. 21	May 30	June 1	June 12		do	Do.
Rupestris × Berlandieri, No. 301B	G	1904	1909	93	S	2		Mar. 6	Apr. 3	do				Sept. 26	
Rupestris × (Cordifolia × Rupestris) No. 202–5.	G	1905	1909	85	S	1.3		Mar. 4	do	June 1				do	Oct. 8
Rupestris × Hybrid Azemar, No. 215.	G	1904	1909	83	S	.6		Mar. 10	Mar. 18	May 26				Sept. 20	Do.
Salt Creek	G	1904	1909	83	S	1.4		Mar. 9	Apr. 1	May 27	June 1	June 12		Sept. 25	Do.
Do	O	1903	1905	88	S	1.5	2 to 5			May 22	do	May 27	June 6	do	Oct. 11
Solonis Ordinaire	G	1904	1909	70	S	.4		Mar. 7	Apr. 5	May 6	June 10	June 11	June 20	Sept. 26	Oct. 8
Solonis Robusta	G	1904	1909	91	S	1.7		Mar. 8	Apr. 1	May 28	do	June 15		do	Oct. 7
Do	O	1907	1909	88	S	.6	3 to 4	Mar. 19		June 5	do	June 9	June 20	Sept. 25	
Solonis × Othello	G	1904	1909	91	S	1.2		Mar. 2	Apr. 1	May 28		June 13		Sept. 26	Oct. 8
Solonis × Othello, No. 1613	O	1907	1909	77	S	.9	2 to 1	Mar. 21		May 30	June 3	June 7	June 15	Sept. 25	
Solonis × Riparia, No. 1616	G	1904	1909	82	S	1.2		Mar. 6	Mar. 30	May 27				Sept. 28	Oct. 7
Do	O	1904	1906	83	S	1.4	2 to 5	Mar. 17		May 25	June 10	June 1	June 17	Sept. 23	Oct. 5
Taylor Narbonne	G	1904	1909	83	S	2.5		Mar. 1	Apr. 2	May 28	do			Sept. 20	Oct. 9
Do	O	1904	1906	88	S	1.9	2 to 4	Mar. 23		May 25	June 8	May 30	June 19	Sept. 26	Oct. 8

Petit Verdot:															
Own roots	Gi	1904			s			Mar. 17	Apr. 1	May 26	June 1	...do....	June 7	Sept. 18	Sept. 20
Dog Ridge	O	1904	1906	95	s	4.5	3 to 5	Mar. 18		May 27	May 31	June 3	June 14	Sept. 24	Oct. 10
Lenoir	O	1903	1905	94	s	5.4	2 to 4	Mar. 15		...do....	...do....	June 2	June 15	Sept. 25	Oct. 6
Rupestris St. George	O	1903	1905	94	s	6.1	3 to 5	Mar. 18		May 20	June 1	May 26	June 20	...do....	Oct. 10
Taylor Narbonne	O	1904	1906	84	s	2.3	3 to 4	Mar. 17		May 21	June 3	...do....	June 16	...do....	Oct. 4
Peverella:															
Own roots	Gi	1904			s			Mar. 20	Mar. 28	May 26	May 29	May 30		Sept. 10	Sept. 20
Dog Ridge	O	1904	1906	90	s	2.7	3 to 5	...do....		May 24	June 8	May 29	June 19	Sept. 26	Oct. 7
Lenoir	O	1903	1905	85	s	2.3	3 to 5	...do....		May 23	...do....	May 28	June 20	Sept. 25	Oct. 15
Rupestris St. George	O	1903	1905	88	s	3.4	2 to 5	Mar. 22		...do....	June 5	...do....	...do....	Sept. 28	Oct. 20
Taylor Narbonne	O	1904	1906	88	s	2.4	2 to 5	Mar. 19		May 27	...do....	June 3	...do....	...do....	Oct. 6
Picpoul:															
Own roots	Gi	1904			c, s			Mar. 18	Mar. 28	May 30		June 7		Sept. 20	Sept. 24
Piment:															
Lenoir	O	1904	1907	90	s	4	3 to 5	Mar. 26		May 27	June 10	June 2	June 25	Sept. 28	Oct. 20
Pince Muscat:															
Own roots	Gi	1905			c, s			Mar. 20	Mar. 27	May 25	June 4	May 30		Aug. 28	Sept. 25
Pineau de Chardonnay:															
Own roots	Gi	1904			c, s			Mar. 15	Mar. 28	May 26	May 30	May 31	June 6	Sept. 18	Sept. 26
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	90	c, s	4.3	2 to 4	Mar. 21		May 19	June 5	May 25	June 19	Oct. 5	
Dog Ridge	O	1903	1905	94	s	3.6	3 to 4	Mar. 20		...do....	May 31	...do....	June 14	Sept. 18	Oct. 3
Herbemont	O	1903	1905	84	s	2.3	2 to 5	Mar. 19		...do....	June 1	May 24	June 12	Sept 20	Oct. 5
Lenoir	O	1903	1905	93	s	4.1	2 to 4	Mar. 16		May 22	May 31	May 26	June 4	Sept. 3	Sept. 25
Mourvedre × Rupestris, No. 1202	O	1904	1906	92	c, s	3.2	2 to 5	Mar. 18		May 19	June 3	May 24	June 24	Oct. 4	
Riparia × Rupestris, No. 101	O	1904	1906	84	s	1.8	2 to 5	Mar. 20		...do....	...do....	...do...	June 26	Sept. 20	
Riparia × Rupestris, No. 3309	O	1904	1906	88	s	3.4	2 to 5	Mar. 19		...do....	May 31	May 25	June 8	...do....	Oct. 4
Rupestris Martin	O	1903	1905	86	s	3.1	2 to 5	Mar. 20		...do....	June 2	May 24	June 10	Sept. 22	Oct. 6
Rupestris St. George	O	1903	1905	91	s	4	3 to 4	Mar. 16		...do....	May 30	May 26	...do....	Sept. 15	Sept. 17
Salt Creek	O	1903	1905	89	s	3.1	2 to 5			May 20	May 31	...do....	June 4	Sept. 20	Sept. 23
Solonis × Riparia, No. 1616	O	1904	1907	85	s	2.5	3 to 5	Mar. 18		May 19	June 1	May 24	June 14	Sept. 25	Sept. 27
Taylor Narbonne	O	1904	1906	91	s	2.8	2 to 4	Mar. 20		...do....	May 30	...do....	June 11	Sept. 18	Oct. 2
Pineau de Ribeauvillers:															
Own roots	Gi	1905			s			Mar. 12	Mar. 29	May 27	May 28	June 2	June 3	Aug. 29	Sept. 25
Dog Ridge	O	1904	1906	92	s	3.6	2 to 4	Mar. 20		May 19		May 24		Sept. 27	Oct. 3
Lenoir	O	1903	1905	84	c, s	3.1	2 to 5	Mar. 21		May 20	May 27	May 25	June 13	Sept. 23	Sept. 28
Rupestris St. George	O	903	1905	84	c, s	2	2 to 5			May 23		May 28		Sept. 24	Sept. 30
Pineau Noir Epernay:															
Own roots	Gi	1905			c, s			Mar. 16	Mar. 29	May 26	May 28	June 1		Aug. 27	Sept. 21
Lenoir	O	1903	1905	83	s	2.4	2 to 4	Mar. 19		May 19	May 31	May 24	June 10	Sept. 22	
Rupestris St. George	O	1903	1905	82	s	3.4	2 to 4	...do....		May 20	...do....	May 16	June 8	Sept. 12	Sept. 21
Pinot Blanc:															
Own roots	Gi	1904			c, s			Mar. 10	Mar. 28	May 26	May 27	June 2		Sept. 15	Sept. 20
Pinot St. George:															
Own roots	Gi	1904			s			Mar. 20	Mar. 31	May 27	May 30	May 31	June 5	Aug. 28	Do.
Dog Ridge	O	1904	1906	93	s	3.6	2 to 4	...do....		May 24	June 5	May 30	June 20	Sept. 25	Oct. 4
Lenoir	O	1903	1905	88	s	3.1	2 to 4	...do....		May 20	May 31	May 25	June 14	Sept. 20	Oct. 6
Rupestris St. George	O	1903	1905	85	s	1.9	2 to 4	...do....		...do....	June 5	May 26	June 17	Sept. 15	Oct. 8
Pinot Vert Doré:															
Own roots	Gi	1904			c, s			Mar. 15	Mar. 31	May 27	May 30	June 5		Sept 5	Sept. 20

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Pis de Chevre des Alps:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904			s			Mar. 15	Mar. 29	May 26	June 2	May 31	June 9	Sept. 24	
Dog Ridge	O	1904	1906	86	s	3.1	2 to 4	Mar. 23		May 19	May 31	May 24	June 12	Sept. 23	Oct. 10
Lenoir	O	1903	1905	90	s	2.9	3 to 5	Mar. 21		do.	June 8	May 23	June 24	do.	Oct. 9
Rupestris St. George	O	1903	1905	92	s	4.9	2 to 3	Mar. 22		May 24	May 31	May 3	June 12	Sept. 22	Oct. 12
Pis de Chevre Rouge:															
Lenoir	O	1904	1907	86	s	3.2	3 to 5	Mar. 20		May 23	June 6	May 28	June 20	Sept. 20	Sept. 21
Pizzutella:															
Own roots	Gi	1904			c, s			Mar. 20	Mar. 28	May 30	June 1	June 5		Sept. 10	Sept. 23
Adobe Giant	F	1904	1906	89	c, s	4	3 to 5	Mar. 25	Apr. 3	May 20	May 30	May 27	June 7	do.	Sept. 20
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	95	c, s	6.6	2 to 4	Mar. 12	Apr. 1	do.	May 29	May 26	June 3	Sept. 12	Do.
Dog Ridge	F	1903	1905	80	s	1.1	2 to 5	Mar. 8	Mar. 30	May 15	May 22	May 27	May 28	Sept. 16	Do.
Herbemont	F	1903	1905	73	s	1.1	3 to 5	Mar. 6	Mar. 25	do.	May 25	May 30	June 1	Sept. 9	
Lenoir	F	1903	1905	91	s	2	2 to 5	do.	Mar. 30	May 12	May 20	May 26	May 27	Sept. 10	Sept. 15
Mourvedre × Rupestris, No. 1202	F	1904	1906	87	c, s	4.9	3 to 5	Mar. 20	Apr. 1	May 14	May 29	do.	June 4	Sept. 5	Sept. 20
Riparia Gloire	F	1903	1905	96	c, s	7.3	2 to 6	Mar. 14	do.	May 18	May 28	May 23	June 3	Sept. 8	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	98	c, s	13.3	2 to 5	Mar. 20	Apr. 6	May 20	May 29	May 27	June 5	Sept. 10	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	95	c, s	5.1	3 to 5	Mar. 13	Apr. 2	May 14	May 25	do.	May 30	do.	Do.
Rupestris Martin	F	1903	1905	82	s	2		Mar. 12	Mar. 30	May 16	May 21	May 25	May 27	Sept. 8	Sept. 9
Rupestris St. George	F	1903	1905	95	c, s	6.5	2 to 5	Mar. 15	Apr. 1	do.	May 28	May 22	June 8	Sept. 10	Sept. 19
Salt Creek	F	1903	1905	86	s	2.5	3 to 6	Mar. 14	Mar. 30	May 21	May 23	May 25	June 5	Sept. 5	Sept. 20
Solonis × Riparia, No. 1616	F	1904	1906	96	c, s	5.6	2 to 5	Mar. 24	Apr. 1	May 20	May 29	May 28	June 6	Sept. 10	Do.
Taylor Narbonne	F	1904	1906	87	c, s	3.7	3 to 5	Mar. 14	Mar. 31	May 15	May 24	May 26	May 28	Sept. 8	Do.
Poulsard:															
Own roots	Gi	1904			s			Mar. 17	Mar. 28	May 27		June 5		Sept. 15	Sept. 21
Precoce de Courtiller:															
Lenoir	O	1903	1905	79	s	2.4	2 to 4	Mar. 18		May 22	May 30	May 26	June 14	Sept. 9	Sept. 25
Rupestris St. George	O	1903	1907	82	s	3.4	2 to 4	Mar. 22		do.	May 31	May 29	June 10	Sept. 22	Do.
Prune de Cazouls:															
Aramon × Rupestris Ganzin, No. 2	F	1907	1909	88	s			Mar. 26		May 21				Sept. 25	
Australis	F	1907	1909	90	s			Mar. 31		May 25				Oct. 5	
Berlandieri × Riparia, No. 420A	F	1907	1909	87	s			Mar. 23		May 21				Sept. 15	

Lenoir	O	1904	1907	91	s	2.8	2 to 5	Mar. 22	......	May 25	June 8	May 30	June 20	Sept. 23	Oct. 10
Monticola × Riparia, No. 18801	F	1907	1909	......	s	......	......	Apr. 3	......	May 23	......	......	......	Sept. 15	
Monticola × Riparia, No. 18808	F	1907	1909	90	s	......	......	Mar. 21	......	May 18	......	......	......	Sept. 30	
Monticola × Rupestris	F	1907	1909	90	s	......	......	Mar. 20	......	May 22	......	......	......	Sept. 20	
Riparia × (Cordifolia × Rupestris, No. 106-8)	F	1907	1909	87	s	......	......	Mar. 26	......	May 23	......	......	......	...do....	
Riparia × Rupestris, No. 101-14	F	1907	1909	......	s	......	......	Apr. 5	......	...do.....	......	......	......	Sept. 30	
Riparia × Rupestris, No. 3306	F	1907	1909	......	s	......	......	Mar. 24	......	...do.....	......	......	......	Sept. 25	
Rupestris Martin	F	1907	1909	89	s	......	......	Mar. 22	......	...do.....	......	......	......	Oct. 10	
Purple Damascus:															
Own roots	Gi	1905	......	......	c, s	......	......	Mar. 26	Mar. 28	May 30	June 6	June 13	......	Sept. 10	Sept. 24
Adobe Giant	F	1904	1906	86	s	1.6	3 to 5	Mar. 12	...do.....	May 16	May 23	May 23	May 30	Sept. 8	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	95	c, s	5.9	2 to 5	...do.....	Mar. 27	May 11	May 20	May 25	May 28	Sept. 11	Sept. 20
Dog Ridge	F	1904	1906	92	c, s	7.3	2 to 5	Mar. 13	Apr. 5	May 17	May 23	May 26	June 2	Sept. 8	Do.
Lenoir	F	1903	1905	92	c, s	2.5	2 to 5	Mar. 7	Apr. 1	May 16	May 20	May 23	May 30	Sept. 12	Sept. 22
Mourvedre × Rupestris, No. 1202	F	1904	1906	95	c, s	5.8	3 to 5	Mar. 13	...do.....	May 20	May 25	May 28	June 4	Sept. 8	Sept. 20
Riparia Gloire	F	1903	1905	89	c, s	4.1	2 to 5	Mar. 7	...do.....	May 15	May 20	May 24	June 1	Sept. 10	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	88	s	3.7	3 to 5	Mar. 8	Mar. 30	May 8	May 24	...do.....	May 29	Sept. 5	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	93	s	4.8	2 to 5	Mar. 12	Apr. 3	May 20	May 28	May 26	June 4	Sept. 12	Do.
Rupestris St. George	F	1903	1905	95	c, s	6.8	3 to 5	Mar. 14	Mar. 25	May 16	May 20	May 24	...do.....	Sept. 10	Sept. 19
Solonis × Riparia, No. 1616	F	1904	1906	87	s	2.7	3 to 5	Mar. 15	Mar. 28	May 10	May 24	May 21	May 29	Sept. 12	Sept. 20
Taylor Narbonne	F	1904	1906	92	c, s	4.5	3 to 5	Mar. 14	Mar. 26	May 14	May 21	May 26	May 27	...do.....	Do.
Quagliano:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 19	Apr. 1	May 26	June 6	May 30	June 11	Sept. 19	Sept. 25
Dog Ridge	O	1904	1906	82	s	1.3	3 to 4	...do.....	......	...do....	June 8	June 2	June 14	Sept. 29	Oct. 6
Lenoir	O	1903	1905	90	s	3.1	3 to 5	...do.....	......	May 23	...do.....	May 29	June 13	Sept. 28	Oct. 8
Rupestris St. George	O	1903	1905	91	s	2.6	3 to 5	Mar. 20	......	May 21	June 5	May 27	June 10	...do.....	Oct. 10
Taylor Narbonne	O	1904	1906	89	s	2.2	2 to 4	Mar. 19	......	May 23	...do.....	May 29	June 11	Sept. 29	Do.
Razaki Zolo:															
Own roots	Gi	1905	......	......	c, s	......	......	Mar. 26	Mar. 31	May 26	June 6	May 26	June 6	Sept. 15	Sept. 23
Rupestris St. George	F	1903	1905	89	c, s	4.5	......	......	......	May 10	......	May 10	......	Sept. 23	
Riparia × Rupestris, No. 3306	O	1904	......	90	c, s	4.2	2 to 4	Mar. 21	......	...do.....	June 8	May 15	June 13	...do.....	Oct. 1
Refosco:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 20	Apr. 10	May 29	May 30	June 6	......	...do.....	
Dog Ridge	O	1904	1906	91	c, s	4	2 to 4	Mar. 24	......	May 23	June 8	May 28	June 15	Sept. 25	Oct. 8
Lenoir	O	1903	1905	90	c, s	3.2	2 to 4	Mar. 16	......	...do.....	June 5	May 29	June 17	Sept. 24	Oct. 15
Rupestris St. George	O	1903	1905	92	s	3.8	3 to 4	Mar. 19	......	May 25	May 31	June 2	June 13	Sept. 23	Oct. 8
Taylor Narbonne	O	1904	1906	88	s	2.8	2 to 4	Mar. 22	......	May 27	June 3	...do.....	June 20	...do.....	Do.
Ribier:															
Lenoir	O	1903	1905	92	s	3.5	3 to 5	Mar. 15	......	May 23	June 1	May 26	June 14	Sept. 28	
Rupestris St. George	O	1903	1905	93	s	6	2 to 5	Mar. 23	......	May 22	June 3	May 28	June 17	Sept. 29	
Robin Noir:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 16	Mar. 27	May 26	May 30	May 31	June 2	Aug. 20	Sept. 23
Rodites:															
Lenoir	O	1904	1907	91	s	3.6	3 to 6	Mar. 21	......	May 25	June 8	May 30	June 25	Sept. 29	Oct. 20
Rose d'Italie:															
Lenoir	O	1903	1905	84	s	1.8	2 to 4	Mar. 17	......	May 22	June 5	May 28	June 29	Sept. 20	Oct. 11
Riparia × Rupestris, No. 3309	O	1904	1908	89	s	2.5	2 to 5	Mar. 24	......	June 1	June 3	June 7	June 17	...do.....	Oct. 1
Rupestris St. George	O	1903	1905	90	c, s	3.8	3 to 5	Mar. 16	......	May 23	May 31	May 28	June 12	Sept. 26	Sept. 30
Solonis × Riparia, No. 1616	O	1904	1908	92	s	3.1	2 to 5	Mar. 24	......	June 1	......	June 6	June 17	Sept. 20	Oct. 8
Taylor Narbonne	O	1904	1908	84	s	1.2	2 to 5	Mar. 16	......	June 2	June 3	June 7	June 14	Sept. 15	Oct. 10

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rothgipfler:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904			c, s			Mar. 15	Mar. 28	May 21	June 1	May 29	June 7	Aug. 24	Oct. 20
Roussaou:															
Own roots	Gi	1905			c, s			Mar. 18	Mar. 30	May 25	June 6	...do...	June 12	Aug. 26	Sept. 23
Dog Ridge	O	1904	1906	91	c, s	4.2	3 to 5	Mar. 16		...do...	Mar. 30	...do...	June 15	Sept. 25	Oct. 10
Lenoir	O	1903	1905	87	s	5.2	2 to 4	...do...		May 27	May 31	June 2	June 16	Sept. 20	Oct. 9
Riparia × Rupestris, No. 3306	O	1904		91	c, s	4.7	1 to 3	Mar. 20		May 15	June 5	June 5	June 18	Sept. 23	Oct. 5
Riparia × Rupestris de Jaeger	F	1907	1907	91	c, s	3.8		Mar. 19		May 22				Aug. 25	Oct. 17
Rupestris St. George	O	1903	1905	90	s	2.4	2 to 4	Mar. 16		May 16	June 5	May 27	June 17	Sept. 15	Sept. 26
Solonis × Riparia, No. 1616	F	1907	1907	84	s	2.2		Mar. 19		May 21				Oct. 17	
Taylor Narbonne	O	1904	1906	80	s	1.5	2 to 4	Mar. 21		May 19	June 1	May 24	June 10	Sept. 25	
Royal Ascot:															
Own roots	Gi	1905			s			Mar. 15	Mar. 26	May 20	...do...	May 26	June 6	Aug. 27	Do.
Saint Laurent:															
Own roots	Gi	1905			s			Mar. 18	Apr. 1	May 26	May 30	May 30	June 5	Aug. 29	Sept. 23
Adobe Giant	F	1904	1906	83	s	2.4	3 to 5	Mar. 24	...do...	May 15	May 18	May 23	May 28	Aug. 10	Sept. 6
Aramon × Rupestris Ganzin No. 1	F	1904	1906	90	c, s	3.7	2 to 6	Mar. 14	Apr. 2	May 16	May 19	May 22	May 30	Aug. 5	Sept. 10
Dog Ridge	F	1903	1905	81	s	2.6	2 to 5	Mar. 15	Apr. 1	May 14	May 22	May 24	May 31	Aug. 1	Sept. 6
Herbemont	F	1903	1905	74	s	3.7	2 to 5	Mar. 14	...do...	May 20		May 25	June 1	...do...	Sept. 10
Lenoir	F	1903	1905	67	s	.8	2 to 6	Mar. 12	Mar. 30	May 12	May 20	May 24	May 27	Aug. 24	Sept. 11
Mourvedre × Rupestris, No. 1202	F	1904	1906	89	c, s	3.3	2 to 6	Mar. 15	...do...	May 15	...do...	May 25	May 31	Aug. 1	Sept. 8
Riparia Gloire	F	1903	1905	82	s	1	2 to 5	Mar. 18	Apr. 1	May 14	...do...	May 22	May 26	Aug. 3	Do.
Riparia × Rupestris, No. 101	F	1904	1906	86	s	2.1	2 to 5	Mar. 14	Mar. 30	May 7	...do...	May 23	May 27	Aug. 1	Sept. 10
Riparia × Rupestris, No. 3309	F	1904	1906	83	s	1.5	2 to 5	Mar. 13	Apr. 1	May 14	May 17	...do...	May 29	...do...	Sept. 4
Rupestris Martin	F	1903	1905	69	s	1.5	2 to 5	Mar. 24	Apr. 5	...do...	May 18	May 22	May 31	Aug. 5	Sept. 8
Rupestris St. George	F	1903	1905	91	c, s	2.4	2 to 6	Mar. 15	Mar. 31	May 13	May 17	May 21	May 30	Aug. 1	Do.
Salt Creek	F	1903	1905	75	s	1.3	2 to 6	...do...	Mar. 27	May 15	May 20	...do...	May 25	Aug. 5	Do.
Solonis × Riparia, No. 1616	F	1904	1906	72	s	1.1	2 to 6	Mar. 6	Mar. 30	May 14	May 17	May 22	May 29	Sept. 9	
Taylor Narbonne	F	1904	1906	50	s	1.3		Mar. 14	Mar. 19	May 16	...do...	May 21	May 26	Aug. 24	Do.
Saint Macaire:															
Own roots	Gi	1904			s			Mar. 12	Mar. 31	May 24	June 2	May 28	June 7	Sept. 18	Sept. 25
Aramon × Rupestris Ganzin, No. 1	O	1904	1909	94	s	3.7	3 to 5							Oct. 1	
Dog Ridge	O	1904	1906	91	s	3.2	2 to 4	Mar. 19		May 25	June 5	May 30	June 20	Sept. 28	Oct. 8

Lenoir	O	1903	1905	94	s	4.9	2 to 5	Mar. 20	....	May 22	June 10	May 28	June 26	Sept. 28	Oct. 12
Mourvedre × Rupestris, No. 1202	O	1904	1909	95	s	....	....	...do....	....	June 2	June 12	June 6	June 25	....	
Rupestris St. George	O	1903	1905	92	s	3.5	2 to 4	Mar. 17	....	May 25	June 8	June 1	June 26	Sept. 28	Oct. 8
Solonis × Riparia, No. 1616	O	1904	1909	91	s	2	....	....	....	....	....	....	....	....	
Taylor Narbonne	O	1904	1906	92	s	2.7	2 to 4	Mar. 20	....	May 27	June 1	June 2	June 15	Sept. 25	Oct. 10
San Gioveto:															
Dog Ridge	O	1904	1906	90	s	6	2 to 4	Mar. 21	....	May 23	June 8	May 29	June 19	Sept. 26	
Lenoir	O	1903	1905	91	s	2.3	2 to 4	Mar. 16	....	May 16	June 3	May 21	June 18	...do....	
Rupestris St. George	O	1903	1905	87	c,s	4.2	3 to 4	Mar. 21	....	May 26	...do....	May 30	June 16	Sept. 20	Sept. 26
Taylor Narbonne	O	1904	1907	94	s	5.8	....	Mar. 18	....	...do....	...do....	June 1	June 14	....	
Satin Blanc:															
Dog Ridge	O	1904	1906	82	s	1.2	....	Mar. 22	....	May 19	....	May 24	....	Sept. 21	
Lenoir	O	1903	1905	87	s	3.4	3 to 5	Mar. 17	....	...do....	May 31	May 23	June 11	Sept. 8	Sept. 20
Rupestris St. George	O	1903	1905	86	s	3.6	3 to 4	Mar. 20	....	May 20	June 4	May 30	June 13	Sept. 9	Do.
Sauvignon Blanc:															
Own roots	Gi	1907	....	......	s	....	....	Mar. 28	Apr. 5	May 27	....	....	....	Sept. 23	
Dog Ridge	O	1904	1906	90	s	3.9	3 to 5	Mar. 22	....	May 23	June 1	May 28	June 14	Sept. 22	Oct. 10
Lenoir	O	1903	1905	92	s	3.1	3 to 5	Mar. 17	....	May 26	June 8	May 30	June 22	Sept. 23	Oct. 9
Rupestris St. George	O	1903	1906	91	s	3.7	2 to 4	Mar. 19	....	May 25	June 5	June 1	June 20	Sept. 21	Oct. 1
Sauvignon Vert:															
Own roots	Gi	1904	....	......	c,s	....	....	Mar. 20	Mar. 29	May 24	June 2	May 28	June 8	Sept. 19	Sept. 20
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	95	c,s	4.5	3 to 6	Mar. 30	....	May 23	June 8	May 29	June 20	Sept. 25	Oct. 11
Aramon × Rupestris Ganzin, No. 2	O	1907	1909	85	s	.8	2 to 3	Mar. 18	....	May 30	June 2	June 7	June 12	Sept. 20	
Berlandieri × Riparia, No. 420A	O	1907	1909	84	s	1.6	2 to 4	...do....	....	June 3	June 5	...do....	June 20	...do....	Oct. 8
Constantia	O	1907	1909	92	s	2.4	2 to 4	Mar. 20	....	May 30	June 3	June 8	June 16	...do....	
Dog Ridge	O	1903	1905	93	c,s	3.2	2 to 6	Mar. 16	....	May 23	June 6	May 29	June 17	Sept. 25	Oct. 10
Herbemont	O	1903	1905	85	c,s	2.6	3 to 6	Mar. 21	....	May 25	June 10	May 30	June 24	...do....	Oct. 9
Lenoir	O	1903	1905	91	s	2.9	2 to 6	Mar. 16	....	May 22	June 8	May 28	June 21	...do....	Oct. 6
Monticola × Riparia, No. 18808	O	1907	1909	89	s	1.7	2 to 4	...do....	....	June 3	June 5	June 7	June 20	...do....	
Mourvedre × Rupestris, No. 1202	O	1904	1906	95	c,s	5.4	2 to 6	Mar. 19	....	May 26	...do....	June 2	June 19	...do....	Oct. 11
Riparia × Rupestris, No. 101	O	1904	1906	93	c,s	3	2 to 6	Mar. 20	....	May 23	June 10	May 28	June 30	Sept. 26	Do.
Riparia × Rupestris, No. 101-14	O	1907	1909	87	s	1.2	3 to 4	...do....	....	June 2	June 8	June 8	June 24	Sept. 20	
Riparia × Rupestris, No. 3306	O	1907	1909	91	s	1.9	2 to 3	Mar. 18	....	June 3	June 5	June 10	June 20	...do....	
Riparia × Rupestris, No. 3309	O	1904	1906	91	c,s	4.1	3 to 6	Mar. 19	....	May 23	...do....	May 28	...do....	Sept. 23	Oct. 4
Rupestris Martin	O	1903	1905	91	c,s	3.5	3 to 6	...do....	....	May 24	June 3	May 29	June 17	Sept. 27	Oct. 5
Rupestris St. George	O	1903	1905	86	s	3.2	3 to 6	Mar. 17	....	May 23	June 6	May 27	June 21	Sept. 25	Oct. 10
Salt Creek	O	1903	1905	90	c,s	2.5	3 to 6	Mar. 16	....	May 22	June 5	May 28	June 19	Sept. 20	Oct. 9
Solonis Robusta	O	1907	1909	90	s	1.7	2 to 4	Mar. 18	....	June 1	...do....	June 10	June 20	...do....	
Solonis × Othello, No. 1613	O	1907	1909	87	c,s	2.1	2 to 3	Mar. 17	....	...do....	June 3	June 8	June 21	...do....	Oct. 11
Solonis × Riparia, No. 1616	O	1904	1906	92	c,s	3.6	3 to 6	...do....	....	May 26	June 10	June 2	June 23	Sept. 25	Oct. 9
Taylor Narbonne	O	1904	1906	93	c,s	4.8	2 to 5	Mar. 20	....	May 27	June 3	June 3	June 15	Sept. 24	Oct. 8
Schiradzouli Blanc:															
Lenoir	O	1904	1907	86	s	2.5	2 to 4	Mar. 18	....	May 24	June 8	May 28	June 20	Sept. 28	Oct. 13
Schiradzouli Violet:															
Lenoir	O	1904	1907	88	s	2.8	2 to 5	...do....	....	May 26	...do....	May 30	June 23	Sept. 25	Oct. 7
Semillon:															
Own roots	Gi	1904	....	......	c,s	....	....	...do....	Mar. 27	May 20	May 29	May 31	June 5	Aug. 28	Sept. 24
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	88	s	2.5	2 to 5	Mar. 20	....	May 23	June 10	May 29	June 21	Sept. 23	Oct. 11
Berlandieri × Riparia, No. 420A	O	1907	1909	83	s	.9	....	...do....	....	May 30	June 3	June 8	June 18	Oct. 6	
Dog Ridge	O	1903	1905	94	c,s	3.6	2 to 4	Mar. 19	....	May 24	...do....	May 30	June 17	Sept. 21	Oct. 8
Herbemont	O	1903	1905	85	c,s	2.5	2 to 5	Mar. 20	....	...do....	June 7	May 29	June 20	Sept. 23	Oct. 11

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Semillon—Continued.				*P. ct.*		*Lbs.*									
Lenoir	O	1903	1905	88	c, s	2.2	2 to 6	Mar. 22		May 20	June 5	May 26	June 18	Sept. 23	Oct. 8
Monticola × Riparia, No. 18808	O	1907	1909	85	s	3.8		Mar. 16		May 30	June 3	June 7	June 17		
Mourvedre × Rupestris, No. 1202	O	1904	1906	89	s	2.8	2 to 4			May 26		June 2		Sept. 23	Oct. 6
Riparia × Rupestris, No. 101	O	1904	1906	89	c, s	2.4	3 to 4	Mar. 21		May 23	June 2	May 29	June 18	Sept. 24	Oct. 11
Riparia × Rupestris, No. 3306	O	1907	1909	91	c, s	1.7	3 to 4	Mar. 20		June 2	June 8	June 6	...do....	Sept. 20	Do.
Riparia × Rupestris, No. 3309	O	1904	1906	89	c, s	2	2 to 4			May 23		May 29		Oct. 5	
Rupestris Martin	O	1903	1905	88	c, s	4.7	2 to 4	Mar. 20		...do....	June 4	May 28	June 20	Sept. 24	Oct. 5
Rupestris St. George	O	1903	1905	86	s	1.9	3 to 4	Mar. 16		May 26	May 31	June 1	June 11	Sept. 22	Oct. 8
Salt Creek	O	1903	1905	89	s	2.7	2 to 4	Mar. 19		May 23	June 10	May 29	June 24	Sept. 20	Oct. 11
Solonis × Othello, No. 1613	O	1907	1909	88	s	1.1		Mar. 20		May 25	June 3	June 8	June 11		
Solonis × Riparia, No. 1616	O	1904	1906	88	c, s	2.7	2 to 4	Mar. 17		...do....	June 5	May 30	June 21	Sept. 24	Oct. 4
Taylor Narbonne	O	1904	1906	90	c, s	2.9	2 to 4	Mar. 20		May 26	...do....	June 2	June 18	...do....	Oct. 8
Semillon Blanc:															
Own roots	Gi	1905			c, s			Mar. 19	Mar. 31	May 28	May 29	June 1	June 4	Aug. 29	Sept. 25
Serine:															
Own roots	Gi	1904			s			Mar. 10	Mar. 29	May 27	May 30	June 6		Sept. 20	Sept. 22
Dog Ridge	O	1904	1907	91	c, s	4.3	3 to 6	Mar. 18		May 25	June 1	May 30	June 21	Sept. 23	Oct. 10
Lenoir	O	1903	1905	89	s	3.7	3 to 4	Mar. 17		May 22	June 5	May 26	June 18	Sept. 20	Oct. 6
Rupestris St. George	O	1903	1905	91	s	5	3 to 5	Mar. 20		May 19	June 3	...do....	June 14	Sept. 15	Do.
Taylor Narbonne	O	1904	1906	86	s	3.6	2 to 4	Mar. 19		May 22	June 2	May 27	...do....	Oct. 2	Oct. 10
Servan Rose:															
Lenoir	O	1904	1907	86	s	2.5	2 to 5	Mar. 18		...do....	June 7	May 28	June 20	Sept. 28	Oct. 13
Sicilien:															
Own roots	Gi	1905			s			Mar. 26	Apr. 1	May 28	May 29	June 4		Aug. 28	Sept. 27
Aramon × Rupestris Ganzin, No. 1	O	1904		88	s	6	2 to 3	Mar. 18		June 1	June 5	June 3	June 10	Sept. 29	Oct. 15
Lenoir	O	1904	1907	87	s	2.9	3 to 6	Mar. 16		May 21	June 4	May 27	June 20	Sept. 9	Oct. 6
Slankamenka:															
Own roots	Gi	1904			s			Mar. 14	Apr. 3	May 29	May 30	June 5		Aug. 23	Sept. 22
Souvenir du Congrès:															
Dog Ridge	O	1904	1906	85	s	2	3 to 5			May 12	June 1	June 3	June 17	Sept. 21	Oct. 1
Lenoir	O	1903	1905	93	s	6.2	3 to 4	Mar. 20		May 26	June 3	May 30	...do....	Sept. 23	
Rupestris St. George	O	1903	1906	89	s	3.7	2 to 4	Mar. 19		...do....	...do....	June 1	June 16	Sept. 20	Sept. 22

Sparbonna:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 17	Apr. 1	May 27	....	....	....	Aug. 29	Sept. 24
Sucre de Marseille:															
Dog Ridge	O	1904	1907	87	c, s	3.5	2 to 4	Mar. 21	....	May 19	June 2	May 25	June 15	Sept. 20	Oct. 8
Lenoir	O	1903	1905	80	s	1.6	3 to 5	Mar. 16	....	May 22	June 3	May 26	June 16	Sept. 15	Sept. 28
Rupestris St. George	O	1903	1905	92	s	4.4	2 to 5	Mar. 24	....	May 25	June 5	May 30	June 19	Sept. 21	Oct. 12
Taylor Narbonne	O	1904	1906	70	s	1.3	....	Mar. 18	....	May 19	June 2	May 25	June 7	...do....	
Sufetha:															
Own roots	O	1904	....	86	s	8	2 to 5	...do....	....	May 6	June 8	May 12	June 19	Oct. 12	
Sultana:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 14	Apr. 1	May 29	June 6	June 2	June 13	Sept. 5	
Sultanina:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 12	Mar. 29	May 28	June 3	...do....	June 10	Sept. 16	
Do	O	1904	....	......	s	3.2	2 to 4	Mar. 24	....	May 11	May 31	May 16	June 16	Sept. 24	Oct. 8
Aramon × Rupestris Ganzin, No. 1	O	1904	1907	94	s	5	3 to 5	Mar. 26	....	May 24	June 14	May 29	June 28	...do....	Oct. 3
Do	F	1907	1907	93	c, s	5.3	3 to 6	Mar. 10	Mar 25	May 17	May 25	June 4	....	Aug. 30	Sept. 21
Aramon × Rupestris Ganzin, No. 2	F	1909	1909	90	s	4.5	....	Mar. 22	....	May 28	....	....	....	Oct. 16	
Australis	F	1909	1909	95	s	6	....	Mar. 20	....	May 24	....	....	....	Sept. 10	Oct. 16
Dog Ridge	O	1904	1907	93	c, s	4	2 to 6	...do....	....	...do....	June 10	May 30	June 22	Sept. 26	
Hotporup	F	1909	1909	90	s	2.5	....	Mar. 14	....	May 25	....	....	....	Oct. 16	
Lenoir	O	1904	1907	92	c, s	8.2	3 to 5	Mar. 8	....	May 23	June 15	May 29	June 30	Sept. 24	Sept. 30
Monticola × Riparia, No. 554	F	1907	1907	86	c, s	2.8	3 to 6	Mar. 12	Mar. 30	May 18	May 23	June 7	....	Aug. 25	Oct. 17
Monticola × Riparia, No. 18804	F	1907	1907	96	c, s	5	3 to 6	Mar. 16	Mar. 27	May 15	May 22	June 5	....	Sept. 21	
Monticola × Riparia, No. 18808	F	1909	1909	98	s	11	....	Mar. 17	....	May 25	....	....	....	Sept. 5	
Monticola × Riparia, No. 18815	F	1907	1907	88	s	3	....	Mar. 20	....	May 26	....	....	....	Aug. 26	
Monticola × Rupestris	F	1909	1909	93	s	3.5	3 to 6	Mar. 12	....	May 21	....	....	....	Sept. 21	
Ponroy	F	1907	1907	94	c, s	3.8	....	Mar. 19	Mar. 27	May 18	May 23	June 6	....	Aug. 27	
Ramsey	F	1907	1907	96	c, s	3.9	3 to 6	Mar. 18	...do....	...do....	...do....	...do....	....	Aug. 25	
Riparia × (Cordifolia Rupestris, No. 106–8).	F	1909	1909	92	s	3.5	....	Mar. 7	....	May 22	....	....	....	Oct. 16	
Riparia × Rupestris, No. 101	O	1907	1907	92	s	4.8	....	Mar. 22	....	May 23	June 13	May 28	June 25	Sept. 24	Oct. 1
Riparia × Rupestris, No. 101–14	F	1909	1909	95	s	8.6	3 to 5	Mar. 8	....	May 20	....	....	....	Oct. 16	
Riparia × Rupestris, No. 3306	F	1909	1909	88	s	2.6	....	Mar. 20	....	May 21	....	....	....	...do....	
Riparia × Rupestris, No. 3309	O	1904	1907	96	c, s	4.7	3 to 5	Mar. 24	....	May 27	June 12	June 2	June 14	Sept. 23	Oct. 5
Riparia × Rupestris de Jaeger, No. 201.	F	1907	1907	83	c, s	2.1	3 to 6	Mar. 18	....	May 22	....	....	....	Sept. 21	
Rupestris des Caussettes	F	1907	1907	88	c, s	2	3 to 5	Mar. 19	Mar. 31	May 16	May 24	June 4	....	...do....	
Rupestris Martin	F	1909	1909	87	s	2.5	....	Mar. 20	....	May 21	....	....	....	Oct. 16	
Rupestris Mission	F	1907	1909	93	s	4.6	....	Mar. 12	....	May 24	....	....	....	...do....	
Rupestris × Berlandieri, No. 219A	F	1907	1909	85	c, s	2.3	3 to 5	Mar. 20	Mar. 30	May 18	May 23	June 5	....	Sept. 5	Oct. 16
Salt Creek	F	1907	1907	96	c, s	4.3	3 to 6	Mar. 16	Mar. 27	May 19	...do....	June 4	....	Aug. 25	
Solonis Robusta	F	1907	1909	95	s	5.5	....	Mar. 22	....	May 23	....	....	....	....	Oct. 16
Solonis × Othello, No. 1613	F	1907	1909	88	s	4.5	....	Mar. 23	....	May 25	....	....	....	....	Do.
Solonis × Riparia, No. 1616	O	1904	1907	91	c, s	4.8	2 to 6	Mar. 16	....	May 24	June 10	May 29	June 25	Sept. 23	Sept. 28
Vermorel	F	1907	1907	93	c, s	4.3	3 to 6	Mar. 18	Mar. 27	May 17	May 22	June 6	....	Aug. 27	Sept. 21
Viala	F	1907	1909	92	c, s	4	....	Mar. 19	....	May 23	....	....	....	Sept. 5	Oct. 16
Sultanina Rosea:															
Lenoir	O	1904	1908	82	s	2.1	....	Mar. 20	....	May 24	June 8	May 28	June 20	Sept. 26	Oct. 6

Table VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
				P. ct.		Lbs.									
Sylvaner:															
Own roots	Gi	1904			c, s			Mar. 17	Mar. 26	May 26	May 28	May 31	June 1	Aug. 28	Sept. 23
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	95	c, s	6.4	2 to 4	Mar. 19		May 19	June 8	May 24	June 20	Sept. 20	Oct. 11
Dog Ridge	O	1903	1905	91	c, s	3.8	2 to 5	Mar. 15		May 20	June 3	do.	June 15	Sept. 22	Oct. 8
Herbemont	O	1903	1905	92	s	4.5	2 to 5	Mar. 22		do.	June 2	May 25	June 13	Sept. 20	Oct. 9
Lenoir	O	1903	1905	93	c, s	5.9	2 to 4	Mar. 18		May 19	do.	May 24	June 16	Sept. 21	Oct. 6
Riparia × Rupestris, No. 101	O	1904	1906	90	c, s	2.2	1 to 4	Mar. 21		do.	do.	do.	June 15	Sept. 22	Oct. 9
Riparia × Rupestris, No. 3309	O	1904	1906	89	c, s	3.6	2 to 4	Mar. 17		do.	June 3	do.	June 24	Sept. 20	Oct. 8
Rupestris Martin	O	1903	1905	86	c, s	3.1	2 to 5	Mar. 20		May 23	June 2	May 28	June 19	do.	Oct. 5
Rupestris St. George	O	1903	1905	86	s	3.5	2 to 4	Mar. 21		May 18	June 1	May 23	June 14	do.	Oct. 6
Syrian:															
Own roots	Gi	1904			s			Mar. 20	Apr. 1	May 28	June 3	June 9		Sept. 18	Oct. 25
Tadone:															
Dog Ridge	O	1904	1906	88	c, s	1.9	3 to 5	Mar. 18		May 24	June 1	May 29	June 17	Sept. 30	Oct. 4
Lenoir	O	1903	1905	90	s	2.2	2 to 6	Mar. 15		May 26	June 2	May 30	June 19	Sept. 28	Oct. 8
Rupestris St. George	O	1903	1905	88	s	2.8	2 to 4	Mar. 16		May 24	June 3	May 29	June 18	do.	Oct. 10
Taylor Narbonne	O	1904	1906	84	s	1.6	2 to 6	Mar. 19		May 26	June 2	June 2	June 16	Sept. 27	Oct. 4
Tannat:															
Own roots	Gi	1904			c, s			Mar. 15	Mar. 29	May 27	June 4	May 30	June 9	Aug. 29	Sept. 23
Dog Ridge	O	1904	1906	93	s	3.5	3 to 5	Mar. 26		May 25	June 7	May 29	June 25	Sept. 28	Oct. 2
Lenoir	O	1903	1905	89	s	2.1	2 to 5	Mar. 20		May 23	June 5	May 28	June 16	Sept. 20	Oct. 4
Rupestris St. George	O	1903	1905	89	s	4.1	3 to 6	do.		do.	June 10	do.	June 25	Sept. 27	Oct. 6
Taylor Narbonne	O	1904	1907	74	s	1.5	2 to 4	Mar. 24		May 24	June 6	May 29	June 20	Sept. 24	Oct. 8
Teneron:															
Own roots	Gi	1904			s			Mar. 14	Mar. 28	May 22	June 4	May 27	June 9	Sept. 15	Sept. 24
Lenoir	O	1904	1907	89	s	2.6	2 to 6	Mar. 24		May 25	June 8	June 1	June 20	Sept. 26	Oct. 7
Riparia × Rupestris, No. 3306	O	1904		94	c, s	7	2 to 4	Mar. 20		May 12		May 16	May 18	Oct. 1	Oct. 8
Terret Monstre:															
Adobe Giant	F	1907	1907	95	c, s	3.3	2 to 4	do.	Mar. 30	May 18	May 23	May 30		Sept. 16	Sept. 21
Canada	F	1907	1907	97	s	5.1	3 to 4	Mar. 14	do.	May 15	do.	May 29		do.	Do.
Lenoir	O	1904	1907	89	s	2.4	2 to 5	Mar. 25		May 24	June 8	do.	June 23	June 28	Oct. 7
Riparia × Rupestris, No. 101	F	1907	1907	95	c, s	5.5	3 to 5	Mar. 23	Apr. 1	May 20	May 21	May 31		Sept. 15	Sept. 21

Rupestris des Caussettes	F	1907	1907	97	c, s	4.7	3 to 5	Mar. 20	...do...	May 16	May 23	May 30		Sept. 16	Do.
Solonis × Riparia, No. 1616	F	1907	1907	94	c, s	5.1	3 to 5	...do...	...do...	...do...	...do...	May 28		...do...	Oct. 17
Valencia	F	1907	1907	98	s	7.8	3 to 4	Mar. 17	Mar. 20	May 17	May 22	May 30		...do...	
Tinta Amarella:															
Own roots	Gi	1904			s			Mar. 18	Mar. 30	May 28	June 3	June 2	June 6	Sept. 18	Sept. 20
Dog Ridge	O	1904	1906	95	c, s	6.6	2 to 4	Mar. 19		May 27	...do...	June 3	June 16	Sept. 25	Oct. 6
Lenoir	O	1903	1905	90	c, s	4	2 to 4	...do...		May 20	...do...	May 26	June 15	...do...	Do.
Rupestris St. George	O	1903	1905	94	s	4.7	2 to 4	Mar. 17		May 24	June 5	May 29	June 17	Sept. 26	Do.
Taylor Narbonne	O	1904	1906	88	s	2.3	2 to 4	Mar. 21		May 25	...do...	May 30	June 18	June 25	Oct. 4
Tinta Cao:															
Own roots	Gi	1904			s			Mar. 15	Apr. 5	May 24	May 30	May 29	June 7	Aug. 29	Sept. 22
Dog Ridge	O	1904	1906	94	c, s	7.7	2 to 4	Mar. 21		...do...	June 5	...do...	June 17	...do...	Oct. 8
Lenoir	O	1903	1905	95	s	4.9	2 to 4	Mar. 17		May 19	June 8	May 24	June 24	Sept. 25	Do.
Rupestris St. George	O	1903	1905	94	s	5.1	2 to 5	Mar. 20		...do...	June 1	May 25	June 15	Sept. 26	Oct. 6
Taylor Narbonne	O	1904	1906	90	s	3.6	1 to 4	Mar. 19		May 23	May 31	May 29	June 12	Sept. 30	Oct. 4
Tinta de Madeire:															
Own roots	Gi	1904			s			Mar. 15	Mar. 29	May 24	May 30	...do...	June 7	Aug. 28	Sept. 20
Dog Ridge	O	1904	1907	92	c, s	5.8	2 to 4	Mar. 19		May 25	June 1	June 1	June 15	Sept. 29	Oct. 2
Lenoir	O	1903	1905	94	s	6.3	2 to 4	Mar. 18		May 26	June 6	June 2	June 17	Sept. 24	Oct. 4
Rupestris St. George	O	1903	1905	96	c, s	6	2 to 4	Mar. 20		May 21	May 31	May 27	June 16	Sept. 10	Sept. 23
Taylor Narbonne	O	1904	1907	87	s	2	2 to 4	Mar. 18		May 26	June 3	June 2	June 7	Sept. 24	
Torok Goher Noir:															
Own roots	Gi	1904			s			Mar. 12	Mar. 28	...do...	May 31	May 31	June 5	Sept. 18	Sept. 25
Traminer:															
Own roots	Gi	1907			s			Mar. 16	Apr. 1	...do...				Sept. 23	
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	88	s	2.7	2 to 5	Mar. 20		...do...	June 3	June 2	June 15	Sept. 25	Oct. 5
Dog Ridge	O	1903	1905	89	c, s	2.6	2 to 4	Mar. 18		May 22	June 23	May 28	June 17	...do...	Oct. 10
Herbemont	O	1903	1905	82	s	1.7	2 to 5	Mar. 20		May 20	June 6	May 26	June 12	Sept. 20	Oct. 5
Lenoir	O	1903	1905	90	s	3.1	2 to 5	Mar. 18		May 25	June 2	June 20	June 20	Sept. 23	Oct. 6
Mourvedre × Rupestris, No. 1202	O	1904	1906	84	s	1.5	2 to 5	Mar. 20		May 26	June 3	...do...	...do...	Sept. 26	Do.
Riparia × Rupestris, No. 101	O	1904	1906	85	s	1.3	2 to 4	Mar. 18		May 22	June 2	May 28	...do...	Sept. 24	Do.
Riparia × Rupestris, No. 3309	O	1904	1906	89	c, s	2.7	2 to 5	Mar. 17		May 20	June 1	May 26	...do...	Sept. 25	Oct. 4
Rupestris Martin	O	1903	1905	85	s	2.2	2 to 5	Mar. 20		May 23	June 4	May 28	June 18	Sept. 24	Oct. 6
Rupestris St. George	O	1903	1905	92	c, s	3.5	2 to 4	Mar. 18		May 24	June 1	May 29	June 10	Sept. 12	Sept. 30
Salt Creek	O	1903	1905	88	s	1.9	2 to 5	...do...		May 22	June 5	May 27	June 17	Sept. 26	Oct. 6
Solonis × Riparia, No. 1616	O	1904	1906	88	s	2.3	2 to 4	May 17		May 26	June 10	June 2	June 25	Sept. 24	Oct. 5
Taylor Narbonne	O	1904	1906	92	s	3.4	2 to 5	Mar. 18		May 27	June 1	June 3	June 12	Sept. 23	
Trentham:															
Own roots	Gi	1904			s			Mar. 15	Apr. 1	May 26	May 28	June 2		Sept. 20	
Lenoir	O	1903	1905	91	c, s	3.3	3 to 5	...do...		...do...	June 5	June 1	June 16	Sept. 9	Oct. 1
Rupestris St. George	O	1903	1905	90	c, s	2.1	2 to 4	Mar. 22		May 22	June 2	May 28	June 10	Sept. 24	Oct. 8
Trifere du Japon:															
Lenoir	O	1904	1907	84	s	2.6	2 to 6	Mar. 20		May 23	June 10	May 29	June 6	Sept. 29	Oct. 10
Triomphe:															
Lenoir	O	1907	1907	92	s	2.9	3 to 5	Mar. 16		...do...	June 5	...do...	June 18	Sept. 27	Oct. 15
Trivoti:															
Own roots	Gi	1904			s			Mar. 20	Apr. 10	May 31	June 12	June 6	June 19	Sept. 24	Oct. 25
Trojka:															
Own roots	Gi	1904			s			Mar. 26	Mar. 29	May 24	June 3	May 29	June 10	Aug. 29	Sept. 24

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Trousseau:				*P. ct.*		*Lbs.*									
Own roots	Gi	1904	......	......	c, s	......	......	Mar. 20	Mar. 26	May 26	May 30	May 31	June 7	Aug. 24	Sept. 20
Dog Ridge	O	1904	1906	93	s	4.6	1 to 5	Mar. 22	......	...do....	June 3	June 2	June 15	Sept. 25	Oct. 8
Lenoir	O	1903	1905	95	c, s	5.1	2 to 4	Mar. 20	......	May 26	June 1	June 1	June 13	Sept. 24	Sept. 28
Rupestris St. George	O	1903	1905	95	c, s	4.8	1 to 4	Mar. 16	......	May 24	...do...	May 30	June 14	...do....	Sept. 25
Taylor Narbonne	O	1904	1906	94	s	6.5	2 to 4	Mar. 21	......	May 27	June 3	June 3	...do....	Sept. 23	
Ulliade Blanche d'Ambre:															
Own roots	Gi	1905	......	......	c, s	......	......	Mar. 20	Mar. 31	May 28	May 30	...do....	......	Sept. 15	Sept. 25
Valandova:															
Dog Ridge	O	1904	1906	92	s	4	2 to 4	Mar. 16	......	May 26	June 3	June 2	June 15	Sept. 27	
Lenoir	O	1904	1906	90	s	3	3 to 4	Mar. 18	......	May 27	...do....	June 1	June 14	Sept. 28	Oct. 7
Valdepenas:															
Own roots	Gi	1904	......	......	s	......	......	Mar. 10	Apr. 1	May 26	May 30	May 30	June 5	Aug. 29	Sept. 23
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	95	c, s	4.7	2 to 5	Mar. 20	......	May 21	June 4	May 27	June 15	Sept. 24	Oct. 11
Dog Ridge	O	1903	1905	94	c, s	3.9	1 to 4	...do....	......	May 24	June 5	May 29	June 20	Sept. 20	Oct. 8
Herbemont	O	1903	1905	95	c, s	5.7	1 to 4	Mar. 25	......	...do....	...do....	...do....	June 17	...do....	Oct. 11
Lenoir	O	1903	1905	95	s	4.4	2 to 4	Mar. 15	......	...do....	June 3	...do....	...do....	Sept. 25	Oct. 8
Mourvedre × Rupestris, No. 1202	O	1904	1906	95	c, s	3	2 to 5	Mar. 18	......	...do....	June 1	May 30	June 13	...do....	Oct. 5
Riparia × Rupestris, No. 101	O	1904	1906	94	s	3.9	2 to 5	Mar. 20	......	...do....	June 2	May 29	June 15	Sept. 24	Oct. 9
Riparia × Rupestris, No. 3309	O	1904	1906	91	s	4.2	2 to 3	Mar. 18	......	May 25	May 31	May 30	...do....	Sept. 23	Oct. 5
Rupestris Martin	O	1903	1905	96	s	6.3	1 to 4	...do....	......	May 21	June 3	May 26	June 18	Sept. 24	Oct. 6
Rupestris St. George	O	1903	1905	97	s	5.6	2 to 4	Mar. 20	......	May 20	May 31	May 25	June 17	Sept. 25	Oct. 8
Salt Creek	O	1903	1905	92	c, s	2.8	2 to 5	...do....	......	May 22	June 3	May 27	June 16	Sept. 22	Oct. 11
Solonis × Riparia, No. 1616	O	1904	1906	91	s	3.4	2 to 5	Mar. 18	......	May 23	June 10	May 29	June 25	Sept. 24	Oct. 4
Taylor Narbonne	O	1904	1906	92	c, s	5	2 to 5	Mar. 23	......	May 25	June 8	May 28	June 23	Sept. 23	Oct. 10
Veltliner:															
Own roots	Gi	1904	......	......	c, s	......	......	Mar. 13	Mar. 28	May 22	May 28	May 27	June 3	Aug. 28	Sept. 20
Dog Ridge	O	1903	1905	92	s	3	3 to 5	Mar. 20	......	May 24	June 1	May 29	June 16	Sept. 24	Oct. 8
Herbemont	O	1903	1905	88	c, s	2.7	3 to 5	Mar. 24	......	May 20	June 5	May 26	June 17	Sept. 23	Oct. 9
Lenoir	O	1903	1905	90	s	3.1	2 to 4	Mar. 20	......	...do....	June 3	May 25	June 16	Sept. 24	Oct. 8
Riparia × Rupestris, No. 3306	O	1907	1909	79	s	.9	......	...do....	......	June 1	...do....	June 5	June 14	......	
Rupestris Martin	O	1903	1905	84	s	1.8	2 to 4	...do....	......	May 19	June 5	May 25	June 20	Sept. 26	Oct. 6
Rupestris St. George	O	1903	1905	85	s	2.1	2 to 5	Mar. 24	......	May 20	May 31	May 27	June 10	Sept. 25	Do.
Salt Creek	O	1903	1905	88	s	2.4	2 to 5	Mar. 20	......	May 19	June 1	May 25	June 16	Sept. 20	Oct. 11

Verdal:															
Own roots	Gi	1905	....	......	c, s	....	....	Mar. 15	Mar. 27	May 21	June 8	May 29	June 13	Sept. 19	Sept. 26
Dog Ridge	O	1904	1907	80	s	3.5	2 to 5	Mar. 22	....	May 26	June 5	June 1	June 20	Sept. 30	Oct. 15
Do	F	1903	1905	96	c, s	4.6	3 to 7	Mar. 14	Mar. 26	May 20	May 24	May 29	June 4	Sept. 6	Sept. 20
Lenoir	O	1903	1905	98	c, s	3.8	3 to 5	Mar. 18	....	May 26	June 8	May 30	June 22	Sept. 28	Oct. 9
Rupestris St. George	O	1903	1905	93	s	5.7	3 to 6	...do....	....	...do....	...do....	June 2	...do....	Sept. 29	Oct. 3
Do	F	1903	1905	92	s	3.3	3 to 6	Mar. 12	Apr. 3	May 15	May 20	May 25	May 29	Sept. 10	Sept. 19
Verdel:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 20	Apr. 10	May 26	June 4	May 31	June 10	Sept. 20	Sept. 28
Adobe Giant	F	1904	1906	93	c, s	3.8	2 to 6	Mar. 14	Mar. 25	May 15	May 20	May 25	May 27	Sept. 5	Sept. 21
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	93	c, s	6.1	2 to 6	Mar. 12	...do....	May 13	May 19	May 22	May 30	...do....	Sept. 20
Dog Ridge	F	1904	1906	97	c, s	15.3	3 to 6	Mar. 25	Apr. 1	May 15	May 21	May 26	May 31	...do....	Do.
Mourvedre × Rupestris, No. 1202	F	1904	1906	95	c, s	7	3 to 6	Mar. 7	Mar. 25	May 13	May 22	May 28	....	Sept. 10	Do.
Riparia × Rupestris, No. 101	F	1904	1906	87	c, s	3.1	3 to 6	Mar. 18	...do....	May 10	May 20	May 25	May 27	Sept. 5	Do.
Riparia × Rupestris, No. 3309	F	1904	1906	97	c, s	8.7	2 to 6	Mar. 12	Mar. 20	May 16	May 18	May 24	...do....	...do....	Do.
Rupestris St. George	F	1903	1905	95	c, s	6.4	2 to 6	Mar. 6	Mar. 31	May 15	May 17	May 20	June 3	Sept. 10	Sept. 19
Solonis × Riparia, No. 1616	F	1904	1906	87	s	2.4	2 to 5	Mar. 8	Mar. 25	May 14	May 20	May 25	May 28	Sept. 8	Sept. 20
Taylor Narbonne	F	1904	1906	92	c, s	5.1	3 to 5	Mar. 6	Mar. 30	May 15	May 26	May 24	May 30	Sept. 12	Do.
Verdelho:															
Own roots	F	1904	....	......	c, s	....	....	Mar. 14	Mar. 28	May 27	May 29	June 4	....	Aug. 29	Sept. 28
Verdelho de Madere:															
Own roots	F	1907	....	......	s	....	....	Mar. 10	Apr. 5	....	....	....	....	Sept. 23	
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	85	s	2	1 to 4	Mar. 7	Mar. 30	May 11	May 17	May 22	May 26	Aug. 16	Sept. 20
Dog Ridge	F	1904	1906	80	s	1.6	1 to 4	Mar. 6	Apr. 1	May 15	May 18	...do....	May 30	Aug. 19	Do.
Riparia × Rupestris, No. 3309	F	1904	1906	82	c, s	1.4	2 to 4	Mar. 13	...do....	May 11	May 16	May 21	May 25	Aug. 20	Do.
Rupestris St. George	F	1903	1905	86	s	2.8	1 to 5	Mar. 5	Mar. 27	May 13	May 15	May 20	May 30	Aug. 15	Sept. 19
Solonis × Riparia, No. 1616	F	1904	1906	83	s	1.4	2 to 5	Mar. 7	Mar. 25	....do....	May 17	May 23	...do....	...do....	Sept. 20
Vermentino:															
Own roots	F	1904	....	......	c, s	....	....	Mar. 10	Mar. 29	May 26	June 6	May 30	June 12	Aug. 29	Sept. 25
Adobe Giant	F	1904	1906	89	s	2.8	2 to 5	Mar. 14	Apr. 1	May 20	May 23	May 26	June 6	Sept. 8	Sept. 20
Aramon × Rupestris Ganzin, No. 1	F	1904	1906	90	s	4.8	2 to 5	Mar. 12	...do....	...do....	June 1	May 30	June 10	Sept. 5	Do.
Dog Ridge	F	1903	1905	89	c, s	2.4	2 to 5	Mar. 14	...do....	May 14	May 30	May 28	June 7	Sept. 14	Do.
Herbemont	F	1903	1905	81	s	1.4	2 to 4	Mar. 7	Mar. 25	May 13	May 20	May 24	May 31	Sept. 5	Do.
Lenoir	F	1903	1905	85	s	.9	2 to 5	Mar. 12	Apr. 1	May 3	May 23	May 25	May 28	Sept. 10	Sept. 19
Mourvedre × Rupestris, No. 1202	F	1904	1906	88	s	3.5	2 to 4	Mar. 8	Mar. 25	May 15	May 25	May 26	June 3	Sept. 8	Sept. 20
Riparia Gloire	F	1903	1905	80	c, s	2.1	2 to 4	...do....	Mar. 20	May 16	May 23	May 23	June 7	Sept. 10	Sept. 19
Riparia × Rupestris, No. 101	F	1904	1906	86	s	1.6	2 to 5	Mar. 14	Apr. 5	May 18	May 28	May 21	June 2	Sept. 8	Sept. 20
Riparia × Rupestris, No. 3309	F	1904	1906	95	c, s	4.7	1 to 4	Mar. 12	Apr. 1	May 12	...do....	May 27	June 5	Sept. 10	Do.
Rupestris Martin	F	1903	1905	84	s	1.7	2 to 4	...do....	Mar. 30	May 16	May 21	May 26	May 30	...do....	Do.
Rupestris St. George	F	1903	1905	92	c, s	3	2 to 5	Mar. 14	Apr. 2	...do....	May 29	May 21	June 3	Sept. 8	Sept. 19
Salt Creek	F	1903	1905	72	c, s	1.8	2 to 5	Mar. 10	Mar. 25	...do....	May 22	May 25	May 31	Sept. 5	Sept. 16
Solonis × Riparia, No. 1616	F	1904	1906	91	c, s	3.7	2 to 5	Mar. 12	Apr. 1	May 14	May 23	May 27	May 28	Sept. 10	Sept. 20
Taylor Narbonne	F	1904	1906	90	c, s	3.2	2 to 4	Mar. 8	...do....	May 12	May 25	May 26	May 30	Sept. 16	Do.
Vernaccia Sarda:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 16	Mar. 31	May 26	June 1	May 31	June 8	Aug. 29	Sept. 24
Vigne de Zericho:															
Lenoir	O	1904	1907	93	s	3.2	2 to 5	Mar. 21	....	May 20	June 8	May 26	June 21	Sept. 30	Oct. 7
Mourvedre × Rupestris, No. 1202	F	1907	1907	98	c, s	7.6	3 to 4	Mar. 18	....	May 18	May 24	May 31	....	Sept. 15	Sept. 21
Wälschriesling:															
Own roots	Gi	1904	....	......	c, s	....	....	Mar. 17	Apr. 1	May 26	May 30	...do.....	June 5	Aug. 27	Sept. 23
Werme:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 13	Apr. 3	...do.....	May 29	June 3	....	Aug. 29	Sept. 20

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Experiment vineyard.	Year stock was planted.	Year grafted.	Congeniality.	How pruned.	Weight of pruning per vine.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
								Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
White Hanepoot:				*P. ct.*		*Lbs.*									
Adobe Giant	F	1904	1906	88	s	1.5	3 to 5	Mar. 24	Apr. 2	May 20	May 28	May 29	June 4	Sept. 5	Sept. 12
Aramon × Rupestris Ganzin, No. 2	F	1907	1909	88	s	1.5		Mar. 20		May 25					
Australis	F	1907	1909	90	s	3		Mar. 30		May 21				Oct. 16	
Berlandieri × Riparia, No. 420A	F	1907	1909	88	s	3		Apr. 1		May 22				...do	
Dog Ridge	F	1904	1906	91	s	3.8	2 to 5	Mar. 13	Apr. 6	May 18	May 30	May 29	June 8	Sept. 5	Sept. 20
Hotporup	F	1907	1909	87	s	2.2		Mar. 20		May 21				Oct. 16	
Monticola × Rupestris	F	1907	1909	89	s	4		Mar. 27		May 27				...do	
Mourvedre × Rupestris, No. 1202	F	1903	1905	89	s	3.5	3 to 5	Mar. 14	Apr. 5	May 20	May 25	May 30	June 7	Sept. 8	Sept. 20
Riparia × (Cordifolia × Rupestris, No. 106–8)	F	1907	1909	90	s	3.5		Mar. 24		...do				Oct. 16	
Riparia × Rupestris, No. 101	F	1904	1906	86	s	1.3	2 to 5	Mar. 12	Apr. 2	May 15	May 31	May 25	June 7	Sept. 16	Sept. 20
Riparia × Rupestris, No. 3306	F	1907	1909	88	s	3		Mar. 30		May 22				Oct. 16	
Riparia × Rupestris, No. 3309	F	1904	1906	92	s	4.1	2 to 5	Mar. 14	Apr. 1	May 20	May 30	May 26	June 8	Sept. 5	Sept. 20
Rupestris Martin	F	1907	1909	80	s			Mar. 23		May 24				Sept. 10	
Rupestris St. George	F	1903	1905	84	s	2.9	3 to 6	Mar. 15	Apr. 5	May 21	May 27	May 29	June 6	Sept. 12	Sept. 19
Rupestris × Berlandieri, No. 219A	F	1907	1909	82	s	2		Mar. 31		...do				Oct. 16	
Taylor Narbonne	F	1904	1906	89	s	2.6	3 to 6	Mar. 8	Apr. 3	May 15	May 25	May 26	May 30	Sept. 4	Sept. 20
Viala	F	1907	1909	87	s	2		Mar. 24		May 24				Oct. 16	
White Tokay:															
Own roots	Gi	1904			s			Mar. 12	Mar. 28	May 22	May 30	May 27	June 5	Aug. 18	Sept. 24
Wilmot Hamburg:															
Own roots	O	1904			s	2.7	3 to 4	Mar. 18		May 16	May 31	May 21	...do	Sept. 29	
Do	Gi	1905			c, s			Mar. 14	Mar. 28	May 27	May 28	June 2		Aug. 28	Sept. 25
Wilmot, No. 16:															
Own roots	Gi	1905			c, s			Mar. 20	Mar. 31	May 15	May 26	May 29		Sept. 25	
Dog Ridge	O	1904	1906	89	s	2.4	3 to 6	...do		May 20	June 2	May 26	June 12	Sept. 28	Oct. 10
Lenoir	O	1903	1905	91	s	2.8	2 to 5	Mar. 21		May 25	May 31	May 29	June 16	...do	Oct. 15
Rupestris St. George	O	1903	1905	89	s	2.2	3 to 6	Mar. 20		May 22	...do	May 28	June 14	Sept. 25	Sept. 30
Zante:															
Own roots	Gi	1904			s			Mar. 22	Mar. 27	...do	May 22	...do	June 7	Sept. 5	Sept. 24

Zinzillosa:															
Own roots	Gi	1904	....	......	s	....	....	Mar. 20	Apr. 1	May 24	June 3	May 30	June 9	Aug. 29	Sept. 25
Zinfandel:															
Own roots	Gi	1907	....	......	s	....	....	...do.....	Mar. 30	June 27	....	....	....	Sept. 15	Sept. 23
Aramon × Rupestris Ganzin, No. 1	O	1904	1906	92	s	4.1	2 to 5	...do.....	....	May 26	June 1	June 2	June 14	Sept. 20	Oct. 11
Berlandieri × Riparia, No. 420A	O	1907	1909	83	s	1	2 to 3	Mar. 19	....	May 30	June 4	June 9	June 15	Sept. 25	....
Dog Ridge	O	1903	1905	93	s	3	2 to 5	Mar. 22	....	May 23	June 5	May 29	June 17	...do.....	Oct. 8
Herbemont	O	1903	1905	86	s	2.5	2 to 5	Mar. 24	....	May 22	...do.....	May 28	...do.....	...do.....	Oct. 11
Lenoir	O	1903	1905	91	s	2.9	2 to 4	Mar. 17	....	...do.....	...do.....	May 27	June 20	Sept. 20	Oct. 8
Monticola × Riparia, No. 18815	O	1907	1909	85	s	1.9	2 to 3	Mar. 18	....	June 1	....	June 6	June 21	...do.....	Oct. 10
Mourvedre × Rupestris, No. 1202	O	1904	1906	89	s	2.9	3 to 5	Mar. 20	....	May 23	June 3	May 28	June 23	Sept. 25	Oct. 11
Riparia × Rupestris, No. 101	O	1904	1906	82	s	2.5	2 to 5	...do.....	....	May 22	June 1	May 27	June 20	Sept. 20	Oct. 5
Riparia × Rupestris, No. 101-14	O	1907	1909	82	s	1.3	....	...do.....	....	May 30	May 31	June 4	June 16	....	....
Riparia × Rupestris, No. 3306	O	1907	1909	86	s	1.3	2 to 3	Mar. 18	....	May 31	June 1	...do.....	June 24	Sept. 20	Oct. 11
Riparia × Rupestris, No. 3309	O	1904	1906	89	s	1.8	2 to 5	Mar. 20	....	May 24	June 2	May 29	...do.....	...do.....	Oct. 8
Rupestris Martin	O	1903	1905	87	s	3.5	2 to 5	...do.....	....	...do.....	June 6	May 30	June 19	Sept. 25	Oct. 13
Rupestris Metallica	O	1907	1909	70	s	.4	....	...do.....	....	May 31	...do.....	June 5	June 21	....	....
Rupestris Mission	O	1907	1909	87	s	1	2 to 4	...do.....	....	...do.....	....	June 4	....	Sept. 20	....
Rupestris St. George	O	1903	1905	92	s	3.1	3 to 5	Mar. 18	....	May 22	June 1	May 27	June 13	Sept. 28	Oct. 10
Salt Creek	O	1903	1905	86	s	1.5	2 to 6	Mar. 22	....	May 23	June 10	May 29	June 24	Sept. 20	Oct. 11
Solonis Robusta	O	1907	1909	79	s	1.6	2 to 5	Mar. 18	....	May 30	June 1	June 6	June 15	...do.....	...do...
Solonis × Othello, No. 1613	O	1907	1909	68	s	1	3 to 4	Mar. 20	....	June 1	June 5	June 5	June 20	Sept. 25	....
Solonis × Riparia, No. 1616	O	1904	1906	72	s	1.1	2 to 5	...do.....	....	May 23	June 10	May 29	June 26	Sept. 29	Oct. 10
Taylor Narbonne	O	1904	1906	82	s	2.1	2 to 5	...do.....	....	May 20	June 8	May 25	June 22	Sept. 25	Oct. 8

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ach-I-Soum:						*P. cent.*								
Dog Ridge								m	t	l	l	r	w	s, st
Lenoir								m	t	l	l	r	w	s, st
Actoni Maceron:														
Lenoir	2	10			3	21.8	0.5780	m-l	t	l	v, l	o	w	s, t
Monticola × Rupestris				3	3	28	.4200	m-l	t	l	v, l	o	w	s, t
Mourvedre × Rupestris, No. 1202								m-l	t	l	v, l	o	w	s, t
Solonis × Riparia, No. 1616			6		3	21.5	.4200	m-l	t	l	v, l	o	w	s, t
Actoniky:														
Lenoir	6	3	7			24.8	.1750	l	t	l	v, l	o	w	s, t
Monticola × Rupestris				2		20	.0050	l	t	l	v, l	o	w	s, t
Motley								l	t	l	v, l	o	w	s, t
Admirable:														
Riparia × Rupestris, No. 3309	25		21	7		22.5	.7150	m	cy	m	m	r	w	t, w
Affenthaler:														
Own roots	10	1½	8	19		25.4	.7125	m	t	c	l	ob	b	s, t
Agadia:														
Riparia × Rupestris, No. 3309					5			m	cy	c	l	r	w	s, st, t
Ahmeur bon Ahmeur:														
Lenoir	8	8	3			21.8	.5600	l	t	c	l	o	r	s, t
Ajaki Odia:														
Mourvedre × Rupestris, No. 1202			6			28.5	.6562	l	cy	m	l	o	w	t
Riparia × Rupestris, No. 101								l	cy	m	l	o	w	t
Rupestris Metallica			3	6		24.5	.5475	l	cy	m	l	o	w	t
Ajmi:														
Lenoir								m	t	s	l	o	w	t
Aleatico:														
Own roots	5	3	3	25		29	.7294	l	t	c	m	r	b	t, w
Dog Ridge	25	10	5	2	5	27	.8325	l	t	c	m	r	b	t, w
Lenoir	25	10	14		29	23.5	.8900	l	t	c	m	r	b	t, w
Rupestris St. George	40	12	15	1	27½	26.5	.8456	l	t	c	m	r	b	t, w
Taylor Narbonne		3				23.2	.8500	l	t	c	m	r	b	t, w

Alexandria:														
Own roots		6	2	8		25.2	.6600	m	t	l	l	o	w	r, s, st, t, w, j
Adobe Giant	8	26	2	12	11	26	.5900	m	t	l	l	o	w	r, s, st, t, w, j
Aramon × Rupestris Ganzin, No. 1	5		2			26.5	.5000	m	t	l	l	o	w	r, s, st, t, w, j
Aramon × Rupestris Ganzin, No. 2			8	4		27.5	.5300	m	t	l	l	o	w	r, s, st, t, w, j
Australis				5½		28.5	.5250	m	t	l	l	o	w	r, s, st, t, w, j
Berlandieri × Riparia, No. 420A			11½	9		29	.5250	m	t	l	l	o	w	r, s, st, t, w, j
Constantia								m	t	l	l	o	w	r, s, st, t, w, j
Dog Ridge	16	15	3	8	5½	26.5	.6281	m	t	l	l	o	w	r, s, st, t, w, j
Herbemont	2		½	⅛	0	25.5	.5281	m	t	l	l	o	w	r, s, st, t, w, j
Lenoir	8	1	8	2½		27	.6056	m	t	l	l	o	w	r, s, st, t, w, j
Monticola × Riparia, No. 18808				4		28	.6150	m	t	l	l	o	w	r, s, st, t, w, j
Monticola × Rupestris				12		28	.5325	m	t	l	l	o	w	r, s, st, t, w, j
Mourvedre × Rupestris, No. 1202	10	1	3	5	0	26.5	.6550	m	t	l	l	o	w	r, s, st, t, w, j
Riparia Gloire	15	1	3	12	2	27	.6018	m	t	l	l	o	w	r, s, st, t, w, j
Riparia × (Cordifolia × Rupestris, No. 106-8)				8½		27	.5350	m	t	l	l	o	w	r, s, st, t, w, j
Riparia × Rupestris, No. 101	10		3	7	18	28.5	.4860	m	t	l	l	o	w	r, s, st, t, w, j
Riparia × Rupestris, No. 101-14				3		27	.4575	m	t	l	l	o	w	r, s, st, t, w, j
Riparia × Rupestris, No. 3306								m	t	l	l	o	w	r, s, st, t, w, j
Riparia × Rupestris, No. 3309	12	1½	5	5	18	27.5	.6490	m	t	l	l	o	w	r, s, st, t, w, j
Rupestris Martin			¼	½	0	25.5	.4987	m	t	l	l	o	w	r, s, st, t, w, j
Rupestris St. George	2	1½	4	5	½	27	.5250	m	t	l	l	o	w	r, s, st, t, w, j
Rupestris × Berlandieri, No. 219A								m	t	l	l	o	w	r, s, st, t, w, j
Salt Creek	10	1	1	2	1	26.7	.5788	m	t	l	l	o	w	r, s, st, t, w, j
Solonis Robusta								m	t	l	l	o	w	r, s, st, t, w, j
Solonis × Othello, No. 1613				3		19	.8700	m	t	l	l	o	w	r, s, st, t, w, j
Solonis × Riparia, No. 1616	4	5	2	10	½	28	.5181	m	t	l	l	o	w	r, s, st, t, w, j
Taylor Narbonne		10	½	2	0	28	.6425	m	t	l	l	o	w	r, s, st, t, w, j
Viala								m	t	l	l	o	w	r, s, st, t, w, j
Alicante:														
Own roots								l	t	m	m	o	b	t, w
Lenoir	25	10	2	10		24.4	.7068	l	t	m	m	o	b	t, w
Riparia × Rupestris, No. 3306								l	t	m	m	o	b	t, w
Rupestris St. George	30	12	3	25		24	.7020	l	t	m	m	o	b	t, w
Alicante (Black Alicante):														
Own roots								l	t	m	m	o	b	t, w
Alicante Bouschet:														
Own roots	25	15	8	17	5	24.8	.6680	m	cy	c	m	r	b	w
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554-5)			7	4	5	21.5	1.3200	m	cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	40	30	8	5	1	24.9	.9767	m	cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 2					3			m	cy	c	m	r	b	w
Berlandieri × Riparia, No. 420A			1½	4	4	22	1.0612	m	cy	c	m	r	b	w
Constantia			2½		6	24.5	.9075	m	cy	c	m	r	b	w
Dog Ridge	40	8	9½	6	10	21	1.1672	m	cy	c	m	r	b	w
Herbemont	20	6				20	.8300	m	cy	c	m	r	b	w
Lenoir	50		13	8	7	20.6	1.0008	m	cy	c	m	r	b	w
Monticola × Riparia, No. 18808								m	cy	c	m	r	b	w
Monticola × Riparia, No. 18815			3	4	5	21.5	1.0270	m	cy	c	m	r	b	w
Mourvedre × Rupestris, No. 1202								m	cy	c	m	r	b	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Alicante Bouschet—Continued.						P. cent.								
Riparia × Rupestris, No. 101	60	10		25	2	21.5	1.0000	m	cy	c	m	r	b	w
Riparia × Rupestris, No. 101-14					4			m	cy	c	m	r	b	w
Riparia × Rupestris, No. 3306			11	3	5	21	1.3237	m	cy	c	m	r	b	w
Riparia × Rupestris, No. 3309	60	10	6		3	23.8	.9650	m	cy	c	m	r	b	w
Rupestris Martin	60	10	8		15	23	.8750	m	cy	c	m	r	b	w
Rupestris Metallica					3			m	cy	c	m	r	b	w
Rupestris Mission								m	cy	c	m	r	b	w
Rupestris St. George	60	15	8	8	6	22.4	.9073	m	cy	c	m	r	b	w
Salt Creek	60	6			4	22.5	.7612	m	cy	c	m	r	b	w
Solonis Robusta					5			m	cy	c	m	r	b	w
Solonis × Othello, No. 1613			4		4	23	1.0350	m	cy	c	m	r	b	w
Solonis Riparia, No. 1616	40	20	7		5	23	.8810	m	cy	c	m	r	b	w
Taylor Narbonne	50	8	9	3	7	22	1.8950	m	cy	c	m	r	b	w
Almeria:														
Own roots								l	t	c	l	o	w	s, st, t
Herbemont		25	12			23	.7537	l	t	c	l	o	w	s, st, t
Lenoir	20	15				20.8	.6100	l	t	c	l	o	w	s, st, t
Riparia × Rupestris, No. 101	8	10	6		3	23.5	.6500	l	t	c	l	o	w	s, st, t
Riparia × Rupestris, No. 3309	10	15	11	15	8	22.6	.7650	l	t	c	l	o	w	s, st, t
Solonis × Riparia, No. 1616	30	30	20			23.5	.6700	l	t	c	l	o	w	s, st, t
Aneb el Cadi:														
Adobe Giant			6		10	25.5	.7837	l	cy	m	m-l	ob	b	s, st, t
Lenoir	10	10	9			20	.7533	l	cy	m	m-l	ob	b	s, st, t
Monticola × Rupestris								l	cy	m	m-l	ob	b	s, st, t
Mourvedre × Rupestris, No. 1202				8		23	.5700	l	cy	m	m-l	ob	b	s, st, t
Riparia Grand Glabre				12		25	.6150	l	cy	m	m-l	ob	b	s, st, t
Angelina:														
Adobe Giant								v l	t	c	l	ob	r	s, st, t
Lenoir	4	2	8		3	21.2	.5825	v l	t	c	l	ob	r	s, st, t
Mourvedre × Rupestris, No. 1202			2			26	.3105	v l	t	c	l	ob	r	s, st, t

Aramon:														
Aramon × Rupestris Ganzin, No. 1	60	20	19	4	8	20.7	.9300	l	t	c	l	ob	b	w, s, t
Australis		3	15	43		20.5	1.0008	l	t	c	l	ob	b	w, s, t
Barnes		5	2			22.6	.7158	l	t	c	l	ob	b	w, s, t
Cornucopia			1			23	.6000	l	t	c	l	ob	b	w, s, t
De Grassett			8			23.5	.8925	l	t	c	l	ob	b	w, s, t
Dog Ridge	40	12	20	7	6	19.8	.9399	l	t	c	l	ob	b	w, s, t
Herbemont	50	20	12	3	12	20	.9319	l	t	c	l	ob	b	w, s, t
Hotporup				20		24	.5625	l	t	c	l	ob	b	w, s, t
Lenoir	60		22	12		18	1.0200	l	t	c	l	ob	b	w, s, t
Monticola × Rupestris								l	t	c	l	ob	b	w, s, t
Mourvedre × Rupestris, No. 1202	40	8	15	2	3	19.5	.9469	l	t	c	l	ob	b	w, s, t
Ponroy			3	36		22	.9187	l	t	c	l	ob	b	w, s, t
Ramsey								l	t	c	l	ob	b	w, s, t
Riparia × Rupestris, No. 101			8	24		21.7	.7912	l	t	c	l	ob	b	w, s, t
Do	60	12	16		2	20.7	.9051	l	t	c	l	ob	b	w, s, t
Riparia × Rupestris, No. 3309	50	10			2	19	.8287	l	t	c	l	ob	b	w, s, t
Riparia × Rupestris de Jaeger				15		22	.8100	l	t	c	l	ob	b	w, s, t
Rupestris des Caussettes								l	t	c	l	ob	b	w, s, t
Rupestris des Semis, No. 81-2		4				23.4	.8812	l	t	c	l	ob	b	w, s, t
Rupestris Martin		3	1		16	24.5	.8225	l	t	c	l	ob	b	w, s, t
Do	50	10	11	4		21.5	.9537	l	t	c	l	ob	b	w, s, t
Rupestris St. George	55	20	20	½	12	20	.9150	l	t	c	l	ob	b	w, s, t
Rupestris × Berlandieri, No. 219A						24	.9750	l	t	c	l	ob	b	w, s, t
Salt Creek		5	1			21.8	.9333	l	t	c	l	ob	b	w, s, t
Do	60	10	17	2	5	20.8	.8169	l	t	c	l	ob	b	w, s, t
Solonis × Othello		3	6	26		22.9	.9100	l	t	c	l	ob	b	w, s, t
Solonis × Riparia, No. 1616			4			21	.7575	l	t	c	l	ob	b	w, s, t
Do	40	25	9	1		19.4	.8812	l	t	c	l	ob	b	w, s, t
Taylor Narbonne	55	20	15			20.8	.8700	l	t	c	l	ob	b	w, s, t
Do			4	13		20.5	.8200	l	t	c	l	ob	b	w, s, t
Valencia			15	25		23	.5812	l	t	c	l	ob	b	w, s, t
Vermorel		3	3			22.2	.7175	l	t	c	l	ob	b	w, s, t
Viala		4	8			23.6	.9200	l	t	c	l	ob	b	w, s, t
Askari:														
Own roots								m	cy	l	m-l	o	b	s, t
Aspiran Noir:														
Own roots	20	25	30	25		20.5	.8206	m	t	c	m	o	b	s, t, w
Augulato:														
Adobe Giant								l	t	l	l	r	b	s, t
Lenoir	3	1½	5		4	20.8	.6050	l	t	l	l	r	b	s, t
Baba:														
Own roots	25	12		25	18	23.6	.3213	m	t	l	m	r	w	w
Dog Ridge	20	8	8	2		22.4	.5250	m	t	l	m	r	w	w
Lenoir	40	15	10	1		25	.5250	m	t	l	m	r	w	w
Rupestris St. George	30	10	30	½	11	21	.5586	m	t	l	m	r	w	w
Taylor Narbonne	50	8	8	4		25	.5475	m	t	l	m	r	w	w

Table VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Bakator:						*P. cent.*								
Own roots	....	....	....	3	3	23	0.6825	l	t	c	m	r	r	t, w
Aramon × Rupestris Ganzin, No. 1	15	20	....	....	....	22.1	.6970	l	t	c	m	r	r	t, w
Dog Ridge	15	3	1½	....	2	21.8	.8618	l	t	c	m	r	r	t, w
Lenoir	15	....	....	....	....	22.2	.7875	l	t	c	m	r	r	t, w
Riparia × Rupestris, No. 101	25	8	....	1	....	21.4	.7585	l	t	c	m	r	r	t, w
Riparia × Rupestris, No. 3309	10	6	6	3	....	23.4	.8525	l	t	c	m	r	r	t, w
Rupestris St. George	20	5	1	8	5	23.2	.4950	l	t	c	m	r	r	t, w
Solonis × Riparia, No. 1616	10	25	....	....	....	21.2	.7912	l	t	c	m	r	r	t, w
Taylor Narbonne	20	1½	2	....	....	22.8	.8200	l	t	c	m	r	r	t, w
Barbarossa:														
Own roots	....	....	....	¼	1	22	1.1925	m	t	c	m	r	r	t, w
Adobe Giant	35	25	5	25	....	23	.5430	m	t	c	m	r	r	t, w
Aramon × Rupestris Ganzin, No. 1	40	....	5	7	20	23	.5375	m	t	c	m	r	r	t, w
Dog Ridge	....	....	8	12	....	22.5	.6187	m	t	c	m	r	r	t, w
Do	5	3	2	....	....	22.6	.6575	m	t	c	m	r	r	t, w
Lenoir	20	20	3	4	14	22.5	.5418	m	t	c	m	r	r	t, w
Do	40	15	15	3	32	24.3	.6318	m	t	c	m	r	r	t, w
Riparia Gloire	10	21	5	43	23	22.6	.5381	m	t	c	m	r	r	t, w
Riparia × Rupestris, No. 3309	30	....	25	26	8	25	.3950	m	t	c	m	r	r	t, w
Rupestris St. George	35	24	15	43	24	22.3	.5256	m	t	c	m	r	r	t, w
Do	20	5	19	2	35	23.5	.6868	m	t	c	m	r	r	t, w
Solonis × Riparia, No. 1616	30	10	25	....	3	24.3	.4025	m	t	c	m	r	r	t, w
Taylor Narbonne	40	2	3	....	....	23.8	.6400	m	t	c	m	r	r	t, w
Barbarossa Finnebourgo:														
Own roots	1½	1	....	3	....	26	.6300	m	t, cy	l	m-l	o	r	t, s, w
Barbera:														
Own roots	3	2	8	....	....	26	.6933	m	cy	c	s	ob	b	w
Dog Ridge	½	....	....	....	....	24.2	.8775	m	cy	c	s	ob	b	w
Lenoir	12	1	3½	....	½	25.7	1.0440	m	cy	c	s	ob	b	w
Rupestris St. George	12	2	5	....	1½	22.8	.7006	m	cy	c	s	ob	b	w
Taylor Narbonne	10	....	3	....	....	25.6	1.2440	m	cy	c	s	ob	b	w

Barducci:														
Adobe Giant	....	....	8	1½	....	22.5	.6562	l	cy	s	s	r	w	w
Lenoir	10	....	....	....	17	19.6	.4350	l	cy	s	s	r	w	w
Bastardo:														
Own roots	6	3	....	15	2	28	.7375	l	cy	c	l	r	b	w
Dog Ridge	8	2	6	....	....	26	.7000	l	cy	c	l	r	b	w
Lenoir	50	5	11	....	2	25.9	.6750	l	cy	c	l	r	b	w
Rupestris St. George	60	4	....	¾	4½	24.3	.5208	l	cy	c	l	r	b	w
Taylor Narbonne	8	....	....	½	....	23.8	.9412	l	cy	c	l	r	b	w
Beclan:														
Own roots	20	10	10	8	....	23.6	.5418	m	cy	l	m	r	b	w
Dog Ridge	45	6	4	15	....	22.9	.6581	m	cy	l	m	r	b	w
Lenoir	50	....	7½	5	20	19.7	.8225	m	cy	l	m	r	b	w
Rupestris St. George	50	8	9	6	19½	23.3	.6693	m	cy	l	m	r	b	w
Taylor Narbonne	40	6	....	2	4	21	.6250	m	cy	l	m	r	b	w
Bellino:														
Own roots	....	....	....	....	....	....	....	m	t	c	m-l	r	b	t, s, w
Adobe Giant	½	8	3	25	....	21.4	.5235	m	t	c	m-l	r	b	t, s, w
Aramon × Rupestris Ganzin, No. 1	6	10	2	8	12	21.3	.5775	m	t	c	m-l	r	b	t, s, w
Dog Ridge	12	11	10	10	....	21.4	.5603	m	t	c	m-l	r	b	t, s, w
Do	6	....	....	1	1	23	.6937	m	t	c	m-l	r	b	t, s, w
Lenoir	12	1	1	7	3	21.9	.4931	m	t	c	m-l	r	b	t, s, w
Do	5	....	....	....	1½	25	.5025	m	t	c	m-l	r	b	t, s, w
Mourvedre × Rupestris, No. 1202	10	8	14	11	20	23.4	.5700	m	t	c	m-l	r	b	t, s, w
Ponroy	....	....	....	....	....	24	.6675	m	t	c	m-l	r	b	t, s, w
Riparia × Rupestris, No. 101	8	12	2	....	12	21.2	.4637	m	t	c	m-l	r	b	t, s, w
Riparia × Rupestris, No. 3309	12	15	4	23	5	22.6	.5600	m	t	c	m-l	r	b	t, s, w
Rupestris des Caussettes	....	....	....	....	....	....	....	m	t	c	m-l	r	b	t, s, w
Rupestris St. George	8	1½	....	3	8	22.4	.6408	m	t	c	m-l	r	b	t, s, w
Do	12	1	....	....	....	21.9	.7237	m	t	c	m-l	r	b	t, s, w
Solonis × Riparia, No. 1616	6	4	....	½	½	24.2	.5475	m	t	c	m-l	r	b	t, s, w
Taylor Narbonne	12	2	1	3	14	23	.6970	m	t	c	m-l	r	b	t, s, w
Do	8	2	2	....	....	24.4	.6600	m	t	c	m-l	r	b	t, s, w
Vermorel	....	....	....	....	....	21	.6675	m	t	c	m-l	r	b	t, s, w
Bengi:														
Own roots	....	....	....	....	....	....	....	m	t	c	l	r	b	t, s
Bermestia Bianca:														
Rupestris St. George	20	18	3	½	3	22.3	.4275	m	t	c	m-l	ob	w	t, s
Besson:														
Own roots	2	....	¼	2	2	26	.5575	m	cy	c	m	r	w	t, s, w
Bhokri:														
Own roots	....	....	....	....	....	....	....	l	t	c	m	....	w	t, s
Bicane:														
Adobe Giant	20	12	3	26	....	23	.5831	m	r	l	l	ob	w	t, s
Australis	....	1½	9	....	....	23.9	.5875	m	r	l	l	ob	w	t, s
Barnes	....	....	....	....	....	....	....	m	r	l	l	ob	w	t, s
Berlandieri × Riparia, No. 420B	....	....	....	....	....	....	....	m	r	l	l	ob	w	t, s
Constantia	....	2	2	13	....	23.6	.6425	m	r	l	l	ob	w	t, s
De Grassett	....	....	....	....	....	....	....	m	r	l	l	ob	w	t, s
Dog Ridge	20	5	9	....	....	22.6	.7875	m	r	l	l	ob	w	t, s

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Bicane—Continued.						*P. cent.*								
Lenoir	11	2	3½		7	20	0.8735	m	r	l	l	ob	w	t, s
Monticola × Rupestris			4	7	4	24	.6691	m	r	l	l	ob	w	t, s
Ponroy					10			m	r	l	l	ob	w	t, s
Ramsey		3	4		4	21.7	.8850	m	r	l	l	ob	w	t, s
Riparia Gloire	40	2				20.7	.5700	m	r	l	l	ob	w	t, s
Riparia × Rupestris, No. 3306								m	r	l	l	ob	w	t, s
Riparia × Rupestris, No. 3309		3	9			23	.6375	m	r	l	l	ob	w	t, s
Rupestris des Caussettes								m	r	l	l	ob	w	t, s
Rupestris St. George	3	2	1			21.6	.8725	m	r	l	l	ob	w	t, s
Do	12	10		2½	2	24.3	.5298	m	r	l	l	ob	w	t, s
Rupestris × Berlandieri, No. 219A								m	r	l	l	ob	w	t, s
Solonis Robusta		3				22	.9562	m	r	l	l	ob	w	t, s
Taylor Narbonne								m	r	l	l	ob	w	t, s
Viala		2	3½			23.5	.6262	m	r	l	l	ob	w	t, s
Black Corinth:														
Own roots		4	25	12		25	.2771	m	cy	c	v, s	r	b	t, r
Black Hamburg:														
Own roots	15	½		8		24.7	.5713	m	r	c	l	ob	b	t, s, w
Black Kapadjulari:														
Dog Ridge	30					22.2	.4875	m	cy	c	m-l	o	b	t, s, w
Lenoir	30		2			19.7	.6700	m	cy	c	m-l	o	b	t, s, w
Black Morocco:														
Own roots	5	20				21.6	.7275	m-l	t	c	l	r	b	t, s
Black Muscat:														
Own roots			½	7		24	.7537	m-l	t	l	m	o	b	t, s, r
Black Prince:														
Own roots	2	1		38		25.1	.5375	l	t	l	m	o	b	t, s, r
Dog Ridge	60	8	20	¾	8	22.3	.6262	l	t	l	m	o	b	t, s, r
Lenoir	30	12	20	3	34	20.7	.7218	l	t	l	m	o	b	t, s, r.
Rupestris St. George	40	10	19	1	30	23	.6180	l	t	l	m	o	b	t, s, r
Taylor Narbonne	40	2		1½		23.7	.5725	l	t	l	m	o	b	t, s, r

Black Shahanee:														
Own roots				3		28	.8625	l						
Black Zante:														
Own roots		1½		9		23	.6525	m	t	c	s	r	b	t, r
Blanc d'Ambre:														
Lenoir	2		2		2	23.5	.5025	m-l	cy	l	s	r	w	t, w
Monticola × Rupestris								m-l	c	l	s	r	w	t, w
Mourvedre × Rupestris, No. 1202			3			27	.3750	m-l	cy	l	s	r	w	t, w
Salt Creek								m-l	cy	l	s	r	w	t, w
Blauer Portugieser:														
Own roots	4	4	1	⅓	12	25	.6138	m	cy	c	s	r	b	t, w
Dog Ridge	30	3	4	½		25.8	.5512	m	cy	c	s	r	b	t, w
Lenoir	30	8	10	2	30	27.8	.4875	m	cy	c	s	r	b	t, w
Rupestris St. George	35	2	8	½	2	26.3	.5531	m	cy	c	s	r	b	t, w
Boal de Madere:														
Own roots	3	8	6	30	2	26.5	.6231	m	cy	l	s	r	w	t, w
Dog Ridge	40	8	15	2		25.5	.7612	m	cy	l	s	r	w	t, w
Lenoir	40	8	9		12	26.6	.6950	m	cy	l	s	r	w	t, w
Rupestris St. George	40	5	14½		43	26.7	.6600	m	cy	l	s	r	w	t, w
Taylor Narbonne	40	5	4			24.7	.7931	m	cy	l	s	r	w	t, w
Boglich:														
Own roots								m-l	t	l	l	r	b	t, s
Bolynino:														
Own roots	12	20		18	7	23.5	.6635	m	cy	c	m	o	b	w
Dog Ridge	40				2	22.2	.8250	m	cy	c	m	o	b	w
Lenoir	40	18	1⅖		9	21.3	1.0325	m	cy	c	m	o	b	w
Rupestris St. George	35	10	15	1½	23	23.2	.4437	m	cy	c	m	o	b	w
Taylor Narbonne	40	10	12	2½	1	23	.9448	m	cy	c	m	o	b	w
Bonarda:														
Own roots						25	.7237	m-l	cy	c	m-l	r	b	t, s
Boudales:														
Own roots				3		29	.8475	m-l	t	l	l	ob	b	t, s, w
Lenoir	45	4	14	4	25	22.2	.6431	m-l	t	l	l	ob	b	t, s, w
Rupestris St. George	35	8	15	¼	28	23.4	.8043	m-l	t	l	l	ob	b	t, s, w
Bowood Muscat:														
Own roots		6	4	7		24.7	.6125	m	t	l	m	ob	w	t, s, r
Brustiano:														
Adobe Giant								l	t	l	l	ob	w	t, s
Lenoir	6				3	22.8	.4200	l	t	l	l	ob	w	t, s
Monticola × Rupestris				4		23	.5250	l	t	l	l	ob	w	t, s
Mourvedre × Rupestris, No. 1202						22	.5770	l	t	l	l	ob	w	t, s
Buccleuch:														
Lenoir	8	3	5½		6	24.3	.6248	l	t	l	m	r	w	t, w
Rupestris St. George								m-l	t	l	m	r	w	t, w
Buckland:														
Own roots								l	t	l	m	r	w	t, s, w
Lenoir	6					22.2	.4950	l	t	l	m	r	w	t, s, w
Burger:														
Own roots	20	30	22	40	12	26.1	.7350	l	t	c	l	r	w	w
(Aestivalis × Monticola) × (Riparia × Rupestris No. 554-5)			8			16	1.1025	l	t	c	l	r	w	w
Aramon × Rupestris Ganzin, No. 1	60	10	20	6	15	18.5	.9581	l	t	c	l	r	w	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Burger—Continued.						*P. cent.*								
Aramon × Rupestris Ganzin, No. 2	....	....	4	....	3	17	0.9525	l	t	c	l	r	w	w
Berlandieri × Riparia, No. 420A	....	....	2	4	3	21.5	.7350	l	t	c	l	r	w	w
Constantia	....	....	3	....	12	21	.8625	l	t	c	l	r	w	w
Columbaud × Rupestris No. 2502	....	....	14	6	4	20.5	.9650	l	t	c	l	r	w	w
Dog Ridge	60	5	18	3	20	17.9	1.0475	l	t	c	l	r	w	w
Herbemont	30	15	4	4	4	19	.7300	l	t	c	l	r	w	w
Lenoir	20	....	10	3	....	19	1.0200	l	t	c	l	r	w	w
Monticola × Riparia, No. 18808	....	....	....	5	....	24	1.9250	l	t	c	l	r	w	w
Mourvedre × Rupestris, No. 1202	60	10	10	5	5	22.2	.7744	l	t	c	l	r	w	w
Riparia × Rupestris, No. 101	40	10	12	1	....	19	1.0050	l	t	c	l	r	w	w
Riparia × Rupestris, No. 101-14	....	....	4	....	....	23	.8925	l	t	c	l	r	w	w
Riparia × Rupestris, No. 3306	....	....	15	1	15	20	1.1742	l	t	c	l	r	w	w
Riparia × Rupestris, No. 3309	60	15	....	....	....	18.7	.7662	l	t	c	l	r	w	w
Rupestris Martin	50	10	12	....	10½	17.9	1.0294	l	t	c	l	r	w	w
Rupestris Metallica	....	....	....	....	4	....	....	l	t	c	l	r	w	w
Rupestris Mission	....	....	....	....	....	....	....	l	t	c	l	r	w	w
Rupestris St. George	30	5	10	4	....	21.1	.7462	l	t	c	l	r	w	w
Salt Creek	30	10	8	1	6	19.5	1.0168	l	t	c	l	r	w	w
Solonis Robusta	....	....	2½	2	4	21.5	.9667	l	t	c	l	r	w	w
Solonis × Othello, No. 1613	....	....	13	10	2	22	1.1670	l	t	c	l	r	w	w
Solonis × Riparia, No. 1616	15	15	4	....	5	20.5	.5756	l	t	c	l	r	w	w
Taylor Narbonne	50	15	19	6	8	16.7	.9337	l	t	c	l	r	w	w
Cabernet Sauvignon:														
Own roots	....	....	....	½	1	24.5	.7950	m	t	m	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	15	6	5	....	....	24.3	.7825	m	t	m	m	r	b	w
Dog Ridge	30	2	....	17	5	23.6	.8525	m	t	m	m	r	b	w
Herbemont	20	3	11	2	4	23	.7706	m	t	m	m	r	b	w
Lenoir	25	8	4	....	....	21.4	.7925	m	t	m	m	r	b	w
Mourvedre × Rupestris, No. 1202	10	4	....	....	....	23.2	.6562	m	t	m	m	r	b	w
Riparia × Rupestris, No. 101	20	3	5	....	....	24.3	.7458	m	t	m	m	r	b	w
Riparia × Rupestris, No. 3309	20	2	6	....	2	25.4	.7100	m	t	m	m	r	b	w

Rupestris Martin	25	2	6	½	3	22.2	.9475	m	t	m	m	r	b	w
Rupestris St. George	25	3	6	....	....	23.5	.7258	m	t	m	m	r	b	w
Salt Creek	20	5	9	1	5	25.1	.8775	m	t	m	m	r	b	w
Solonis × Riparia, No. 1616	20	12	6	2	....	23.6	.7862	m	t	m	m	r	b	w
Taylor Narbonne	25	4	9	3	....	20.6	.9225	m	t	m	m	r	b	w
Calabrian:														
Own roots	....	3	2	....	....	23.6	.5862	l	cy	l	l	r	w	t, s
Australis	....	5	3	....	....	24.6	.6175	l	cy	l	l	r	w	t, s
Lenoir	2	8	1	½	9	23.8	.5556	l	cy	l	l	r	w	t, s
Do	8	1	4	....	3	25.4	.6650	l	cy	l	l	r	w	t, s
Monticola × Rupestris	....	....	6½	....	10	25.5	.5175	l	cy	l	l	r	w	t, s
Riparia Gloire	12	7	3	4	17	26	.5393	l	cy	l	l	r	w	t, s
Rupestris des Caussettes	....	....	....	....	....	....	....	l	cy	l	l	r	w	t, s
Rupestris St. George	10	9	15	24	8	23.6	.5531	l	cy	l	l	r	w	t, s
Calmette:														
Adobe Giant	....	5	3	....	....	24.2	.7225	m	t	l	l	r	b	w
Aramon × Rupestris Ganzin, No. 1	....	2	4	....	....	24	.7425	m	t	l	l	r	b	w
Do	40	40	9	2	15	21.6	.7775	m	t	l	l	r	b	w
Berlandieri × Riparia, No. 420B	....	5	6	....	....	25.2	.6625	m	t	l	l	r	b	w
Constantia	....	....	....	....	....	....	....	m	t	l	l	r	b	w
Herbemont	....	10	....	....	....	21.3	.9900	....	t	l	l	r	b	w
Lenoir	20	8	6	2½	....	22.5	.8131	m	t	l	l	r	b	w
Monticola × Riparia, No. 18804	....	....	....	7	....	28	.6367	m	t	l	l	r	b	w
Monticola × Riparia, No. 18815	4	4	13	....	....	26	.6700	m	t	l	l	r	b	w
Monticola × Rupestris	....	2	4	....	....	22.6	.6725	m	t	l	l	r	b	w
Ponroy	....	....	....	....	....	....	....	m	t	l	l	r	b	w
Ramsey	....	....	6	16	....	25	.6000	m	t	l	l	r	b	w
Riparia × Rupestris, No. 101	....	....	....	....	....	23	.6450	m	t	l	l	r	b	w
Do	40	30	13	....	....	20.1	.8430	m	t	l	l	r	b	w
Riparia × Rupestris, No. 3309	....	....	....	28	....	26	.6300	m	t	l	l	r	b	w
Do	50	20	14	1	8	18.8	.8183	m	t	l	l	r	b	w
Riparia × Rupestris de Jaeger	....	....	4	6	....	26.5	.5850	m	t	l	l	r	b	w
Rupestris × Berlandieri, No. 219A	....	6	6	13	....	24.7	.7408	m	t	l	l	r	b	w
Rupestris × Berlandieri, No. 301-37-152	....	....	....	....	....	....	....	m	t	l	l	r	b	w
Salt Creek	....	....	....	....	....	....	....	m	t	l	l	r	b	w
Solonis Robusta	....	....	....	....	....	23	.7800	m	t	l	l	r	b	w
Solonis × Othello	....	10	4	22	....	23.5	.7450	m	t	l	l	r	b	w
Solonis × Riparia, No. 1616	....	....	3½	....	....	25.5	.6520	m	t	l	l	r	b	w
Do	30	15	3	....	3	21.1	.6350	m	t	l	l	r	b	w
Taylor Narbonne	....	....	....	....	....	....	....	m	t	l	l	r	b	w
Vermorel	....	....	....	5	....	28	.6450	m	t	l	l	r	b	w
Carignane:														
Own roots	20	20	5	35	12	22.7	.8475	m	t	l	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	60	40	15	9	15	22.7	.9075	m	t	l	m	r	b	w
Dog Ridge	60	12	20	16	28	21.7	1.0575	m	t	l	m	r	b	w
Herbemont	50	10	14	5	18	22	.9015	m	t	l	m	r	b	w
Lenoir	55	20	16	12	10	20.5	.9619	m	t	l	m	r	b	w
Mourvedre × Rupestris, No. 1202	60	15	15	8	12	21	1.2924	m	t	l	m	r	b	w
Riparia × Rupestris, No. 101	60	10	11	5	7	22.4	.8006	m	t	l	m	r	b	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Carignane—Continued.						*P. cent.*								
Riparia × Rupestris, No. 3309	50	10	13	....	10	21.8	1.0160	m	t	c	l	ob	b	s, w
Rupestris Martin	50	12	10	....	32	20.6	1.0082	m	t	c	l	ob	b	s, w
Rupestris St. George	60	20	16	3	18	22.3	.8620	m	t	c	l	ob	b	s, w
Salt Creek	60	12	12	4	12	23.7	1.1437	m	t	c	l	ob	b	s, w
Solonis × Riparia, No. 1616	50	57	9	5	5	22.2	.9000	m	t	c	l	ob	b	s, w
Taylor Narbonne	50	20	15	8	12	21	.9884	m	t	c	l	ob	b	s, w
Castiza:														
Riparia × Rupestris, No. 3309	....	....	....	....	....	....	....	m	t	c	m	ob	r	s, t
Catarratto a la Porta:														
Own roots	....	¼	¼	1½	4	26.2	.7111	m	t	c	l	ob	b	w
Chaouch:														
Own roots	....	....	....	....	....	29.2	.4912	m	cy	c	l	ob	w	s, t
Lenoir	....	....	....	....	....	23.4	.6375	m	cy	c	l	ob	w	s, t
Chaouch Rose:														
Lenoir	10	....	....	....	1	20.8	.3750	m	cy	c	l	ob	r	s, t
Charbono:														
Own roots	....	....	....	2	2	21	.8250	m	t	l	m	r	b	w
Dog Ridge	5	....	....	....	....	20.8	.5745	m	t	l	m	r	b	w
Lenoir	35	20	....	....	....	20.9	.7612	m	t	l	m	r	b	w
Rupestris St. George	50	15	....	....	....	22.6	.5325	m	t	l	m	r	b	w
Riparia × Rupestris, No. 101	40	10	9	....	4	21.7	.6881	m	t	l	m	r	b	w
Riparia × Rupestris, No. 3309	50	8	13	....	8	22.3	.7237	m	t	l	m	r	b	w
Solonis × Riparia, No. 1616	50	20	12	4	6	22.5	.7108	m	t	l	m	r	b	w
Taylor Narbonne	35	15	11	4	5	21.2	.6712	m	t	l	m	r	b	w
Chasselas Bouches du Rhone:														
Own roots	....	....	1	1½	....	23.2	.3562	m	cy	c	m	r	w	w, t
Dog Ridge	15	....	6½	2	6	21.2	.5493	m	cy	c	m	r	w	w, t
Lenoir	30	....	1	....	10	21.2	.5400	m	cy	c	m	r	w	w, t
Rupestris St. George	15	....	14	½	3	21.7	.4968	m	cy	c	m	r	w	w, t
Taylor Narbonne	15	....	....	....	....	21.8	.4645	m	cy	c	m	r	w	w, t

Chasselas Bulhery:														
Dog Ridge	30	....	3	3	8	21	.5518	m	cy	c	m	r	w	w, t
Lenoir	18	....	15	....	....	21	.5587	m	cy	c	m	r	w	w, t
Rupestris St. George	8	....	7	....	....	20.6	.4981	m	cy	c	m	r	w	w, t
Taylor Narbonne	2	....	1	....	1	20	.4612	m	cy	c	m	r	w	w, t
Chasselas Cioutat:														
Own roots	....	....	....	....	1	....	....	s	cy	c	m	r	w	w, t
Dog Ridge	18	....	....	10	8	21.3	.5075	s	cy	c	m	r	w	w, t
Lenoir	6	....	2	....	3	21.7	.5300	s	cy	c	m	r	w	w, t
Rupestris St. George	4	....	½	....	6	22	.5925	s	cy	c	m	r	w	w, t
Chasselas Doré:														
Own roots	10	3	....	....	....	26	.3862	m	cy	m	m	r	w	w, t
Dog Ridge	20	8	....	....	1	21.2	.5350	m	cy	m	m	r	w	w, t
Lenoir	12	....	5	2	8	21.7	.5681	m	cy	m	m	r	w	w, t
Rupestris St. George	8	....	4	....	....	19.9	.5125	m	cy	m	m	r	w	w, t
Chasselas Duhamel:														
Aramon × Rupestris Ganzin, No. 1	8	....	....	....	....	20	.5325	m	cy	m	m	r	w	w, t
Dog Ridge	8	....	7	3	4	20.8	.6094	m	cy	m	m	r	w	w, t
Lenoir	15	....	10	....	....	20.2	.5555	m	cy	m	m	r	w	w, t
Rupestris St. George	20	....	9	....	....	21.5	.5200	m	cy	m	m	r	w	w, t
Taylor Narbonne	....	....	....	....	....	20.4	.5700	m	cy	m	m	r	w	w, t
Chasselas de Fontainebleau:														
Rupestris St. George	2½	4	1	7	15	26.4	.4627	m	t	l	m	r	r	w, t
Chasselas Florence:														
Own roots	4	....	....	....	12	23	.3450	m	cy	m	m	r	w	w, t
Dog Ridge	12	....	2½	....	5	23.1	.5475	m	cy	m	m	r	w	w, t
Lenoir	20	....	⅛	....	4	21.6	.5075	m	cy	m	m	r	w	w, t
Rupestris St. George	5	....	5	1	7	22.7	.5906	m	cy	m	m	r	w	w, t
Taylor Narbonne	2	....	....	....	3	25	.3975	m	cy	m	m	r	w	w, t
Chasselas Montauban:														
Own roots	....	....	....	....	20	....	....	m	cy	m	m	r	w	w, t
Lenoir	....	....	2	....	3	21.3	.5775	m	cy	m	m	r	w	w, t
Rupestris St. George	10	....	14	....	....	21.7	.5525	m	cy	m	m	r	w	w, t
Chasselas Musque Vrai:														
Own roots	....	....	....	3	....	23	.7850	s	cy	l	m	r	w	w, t
Dog Ridge	20	....	4	10	10	21.2	.6306	s	cy	l	m	r	w	w, t
Lenoir	30	....	....	1	4	21.4	.5644	s	cy	l	m	r	w	w, t
Rupestris St. George	6	....	17	⅓	2	21.8	.7690	s	cy	l	m	r	w	w, t
Chasselas Negrepont:														
Own roots	3	....	....	....	....	23	.3375	m	cy	c	m	r	w	w, t
Dog Ridge	10	....	5	....	2	20.8	.4150	m	cy	c	m	r	w	w, t
Lenoir	20	....	7	2	4	21	.4950	m	cy	c	m	r	w	w, t
Riparia Gloire	....	....	....	....	....	....	....	m	cy	c	m	r	w	w, t
Rupestris St. George	8	3	10	5	2	23.6	.4200	m	cy	c	m	r	w	w, t
Do	15	....	2	⅓	8	20.4	.5531	m	cy	c	m	r	w	w, t
Taylor Narbonne	15	....	5	3	3	22.1	.5175	m	cy	c	m	r	w	w, t
Chasselas Rose:														
Own roots	2	....	4	3	....	24.4	.3925	m	cy	c	m	r	r	w, t

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Chasselas Rose de Falloux:						*P. cent.*								
Own roots	2	....	6	....	....	21.6	0.3375	m	cy	c	m	r	r	w, t
Aramon × Rupestris Ganzin, No. 1	25	....	4	1½	7	21.2	.6115	m	cy	c	m	r	r	w, t
Do	....	4	4½	....	4	20.5	.3667	m	cy	c	m	r	r	w, t
Australis	....	3	3½	16	....	21.9	.4850	m	cy	c	m	r	r	w, t
Dog Ridge	20	....	2	½	....	20.8	.5643	m	cy	c	m	r	r	w, t
Lenoir	16	....	9	....	5	20.2	.5458	m	cy	c	m	r	r	w, t
Mourvedre × Rupestris, No. 1202	20	....	1	½	½	19.8	.5550	m	cy	c	m	r	r	w, t
Riparia × Rupestris, No. 101	....	....	....	6	5	20	.4200	m	cy	c	m	r	r	w, t
Do	20	....	4	....	6	20.8	.1510	s	cy	c	m	r	r	t, s, w
Riparia × Rupestris, No. 3309	....	....	....	....	10	....	....	s	cy	c	m	r	r	t, s, w
Do	30	....	12	....	4	20.6	.6243	s	cy	c	m	r	r	t, s, w
Rupestris St. George	12	4	8	3	10	24.8	.4131	s	cy	c	m	r	r	t, s, w
Do	20	....	11	....	4	21.2	.5700	s	cy	c	m	r	r	t, s, w
Salt Creek	....	....	....	....	....	....	....	s	cy	c	m	r	r	t, s, w
Solonis × Riparia, No. 1616	20	....	5	2	2½	20.8	.5412	s	cy	c	m	r	r	t, s, w
Taylor Narbonne	....	....	....	4	8	17	.5400	s	cy	c	m	r	r	t, s, w
Do	15	....	....	1	6	21.8	.5225	s	cy	c	m	r	r	t, s, w
Chasselas Rose Royal:														
Aramon × Rupestris Ganzin, No. 1	10	....	3	....	....	20.3	.4870	s	cy	c	m	r	r	t, s, w
Dog Ridge	25	....	....	....	....	20.6	.4125	s	cy	c	m	r	r	t, s, w
Lanoir	25	....	4	....	3	22.3	.4350	s	cy	c	m	r	r	t, s, w
Rupestris St. George	11	....	6½	....	2	23	.5275	s	cy	c	m	r	r	t, s, w
Taylor Narbonne	3	....	....	....	....	21.2	.4725	s	cy	c	m	r	r	t, s, w
Chasselas Rouge:														
Own roots	4	....	5	5	18	21.9	.4346	s	cy	c	m	r	r	t, s, w
Lenoir	20	....	5	....	8	20.8	.4675	s	cy	c	m	r	r	t, s, w
Rupestris St. George	15	....	8	½	3	22	.5146	s	cy	c	m	r	r	t, s, w
Chasselas St. Bernard:														
Canada	....	....	....	....	....	....	....	m	cy	l	m	r	w	t, s
Lenoir	6	....	....	....	....	17.8	.3600	m	cy	l	m	r	w	t, s
Riparia × Rupestris, No. 101	....	....	....	....	....	....	....	m	cy	l	m	r	w	t, s

Rupestris des Caussettes	....	....	....	....	....	....	....	m	cy	l	m	r	w	t, s
Rupestris St. George	....	....	....	....	....	....	....	m	cy	l	m	r	w	t, s
Valencia	....	....	....	....	....	....	....	m	cy	l	m	r	w	t, s
Chauche Noir:														
Own roots	....	1	3½	....	6	32.2	.5625	s	cy	c	s	r	b	w
Dog Ridge	10	2	2	....	....	28.2	.5665	s	cy	c	s	r	b	w
Lenoir	20	2	....	....	6	28.5	.4537	s	cy	c	s	r	b	w
Rupestris St. George	15	1½	4½	....	½	27.9	.6200	s	cy	c	s	r	b	w
Chaweesh:														
Lenoir	....	....	....	....	....	....	....	s	....	....	....	....	....	
Chenin Blanc:														
Own roots	2	3½	1	8	....	22.8	.7701	m	cy	c	s	r	w	w
Dog Ridge	6	5	4	2	....	24.9	.7835	m	cy	c	s	r	w	w
Lenoir	....	2	15	....	27	23.2	.8500	m	cy	c	s	r	w	w
Rupestris St. George	20	10	13	....	....	24.9	.8300	m	cy	c	s	r	w	w
Child of Hall:														
Lenoir	1	....	4	....	1	24.4	.7750	m	t	l	m-l	ob	w	t
Cinsaut:														
Own roots	1	4	6	12	12	24.5	.7125	m-l	t	m	m	r	b	w
Lenoir	25	5	1	12	12	23.9	.6306	m-l	t	m	m	r	b	w
Rupestris St. George	25	3	20	....	30	23.7	.6769	m-l	t	m	m	r	b	w
Cipro Nero:														
Own roots	....	....	....	7	....	22	.6450	m	t	l	l	o	b	t, s
Clairette à Gros Grain:														
Lenoir	40	15	13	....	18	22.3	.8406	m	t	l	s	o	w	t, w
Monticola × Rupestris	....	....	....	22	....	25	.7875	l	t	l	s	o	w	t, w
Clairette Blanche:														
Own roots	6	15	8	5	8	22.1	.6523	m	t	l	s	ob	w	t, w
Clairette Mazel:														
Own roots	....	½	....	11	....	25.6	.6067	s	cy	l	s	ob	w	t, w
Lenoir	15	5	1	....	....	24	.4100	s	cy	l	s	ob	w	t, w
Riparia Gloire	15	5	....	....	....	24	.3750	s	cy	l	s	ob	w	t, w
Coarna Neagra:														
Australis	....	....	....	....	....	....	....	m	cy	l	l	o	b	t, s
Lenoir	5	....	4	....	3	19.1	.7250	m	cy	l	l	o	b	t, s
Rupestris Martin	....	....	....	....	....	....	....	m	cy	l	l	o	b	t, s
Colutum Cucco Bitundo:														
Own roots	4	4	2	12	18	23	.6830	m	t	l	m	r	w	t
Commandeur:														
Riparia × Rupestris, No. 3306	50	10	....	....	....	27.4	.6125	m	cy	c	l	ob	w	t, w
Corbeau Noir Shar:														
Own roots	6	8	....	4	8	23.9	.6881	m	cy	c	s	r	b	t, w
Corinthe Blanc:														
Lenoir	....	....	....	....	....	....	....	m	cy	c	s	r	w	t, r, w
Corinthe à Gros Grain:														
Canada	....	....	13	....	....	24.5	.7425	l	t	c	l	ob	r	t, s, w
Lenoir	15	4	14	....	6	20.5	.7144	l	t	c	l	ob	r	t, s, w
Mourvedre × Rupestris, No. 1202	....	2	16	....	....	24.5	.6037	l	t	c	l	ob	r	t, s, w
Ramsey	....	....	....	16	....	23.5	.8850	l	t	c	l	ob	r	t, s, w
Riparia × Rupestris, No. 3309	....	1	....	10	....	24.5	.7537	l	t	c	l	ob	r	t, s, w
Rupestris St. George	....	4	9	....	....	24.8	.7387	l	t	c	l	ob	r	t, s, w
Solonis × Riparia, No. 1616	....	4	....	....	....	22.1	.9075	l	t	c	l	ob	r	t, s, w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape	Compact or loose	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corinthe Rose:						*P. cent.*								
Adobe Giant	....	....	....	....	....	....	....	l	cy	c	s	r	r	t, r, w
Canada	....	....	....	1½	....	23	0.8400	l	cy	c	s	r	r	t, r, w
Constantia	....	....	....	....	....	....	....	l	cy	c	s	r	r	t, r, w
Lenoir	....	....	2	....	3	26.5	.9400	l	cy	c	s	r	r	t, r, w
Monticola × Rupestris	....	....	2	....	....	28	.6525	l	cy	c	s	r	r	t, r, w
Mourvedre × Rupestris, No. 1202	....	....	2	....	....	26	.5475	l	cy	c	s	r	r	t, r, w
Riparia Grand Glabre	....	....	....	....	....	....	....	l	cy	c	s	r	r	t, r, w
Riparia × Rupestris, No. 101	....	....	....	....	....	....	....	l	cy	c	s	r	r	t, r, w
Vermorel	....	....	....	....	....	....	....	l	cy	....	....	....	....	
Coristano:														
Australis	....	15	41	....	....	20.6	1.1058	vl	t	c	s	r	r	t, w
Barnes	....	....	....	....	....	....	....	vl	t	c	s	r	r	t, w
Lenoir	20	4	10	8	28	18.4	.8890	vl	t	c	s	r	r	t, w
Monticola × Rupestris	....	6	37	25	....	21.1	.6750	vl	t	c	s	r	r	t, w
Rupestris Martin	....	4	....	....	....	19.8	1.0870	v, l	t	c	s	r	r	t, w
Rupestris St. George	....	8	10	....	....	19.6	1.2050	v, l	t	c	s	r	r	t, w
Cornichon:														
Own roots	....	8	6	12	....	20	.5750	l	t	l	l	o	b	t, s
Aramon × Rupestris Ganzin, No. 1	40	....	....	....	....	20.2	.6525	l	t	l	l	o	b	t, s
Lenoir	....	....	8	....	....	21	.9375	l	t	l	l	o	b	t, s
Riparia Gloire	....	....	....	....	....	....	....	l	t	l	l	o	b	t, s
Rupestris × Berlandieri, No. 301A	....	....	8	....	....	20	.9575	l	t	l	l	o	b	t, s
Solonis Robusta	....	....	8	....	....	21	.7725	l	t	l	l	o	b	t, s
Crabbs Burgundy:														
Own roots	....	....	....	4	3	22	.9186	m	cy	c	m	r	b	w
Aramon × Rupestis Ganzin, No. 1	45	....	10	....	3	21.4	.8017	m	cy	c	m	r	b	w
Dog Ridge	30	12	4	2	....	21.3	.8419	m	cy	c	m	r	b	w
Lenoir	40	10	24½	12	16	21.2	.8880	m	cy	c	m	r	b	w
Riparia × Rupestris, No. 101	50	8	10	1	....	21.2	.8275	m	cy	c	m	r	b	w
Riparia × Rupestris, No. 3309	60	5	13	5	5	22.4	.7665	m	cy	c	m	r	b	w
Rupestris St. George	30	8	17	4	31	22.6	.8055	m	cy	c	m	r	b	w
Solonis × Riparia, No. 1616	30	20	....	3	....	19.5	.8150	m	cy	c	m	r	b	w
Taylor Narbonne	30	8	....	3	3	21.8	.6844	m	cy	c	m	r	b	w

Croetto:														
Own roots	5	4	10	8	12	20	.8355	m	t	l	s	o	b	w
Crujidero:														
Own roots	20		25	5	7	23.9	.5868	m	t	l	l	o	w	t
Danugue:														
Own roots				21		22	.8025	m	t	l	l	r	b	t, s
Dog Ridge	5		1½		1	24.1	.5100	m	t	l	l	r	b	t, s
Lenoir	35			6		25.4	.5220	m	t	l	l	r	b	t, s
Rupestris St. George	40		4½		4	23.9	.5494	m	t	l	l	r	b	t, s
Taylor Narbonne						22.6	.6150	m	t	l	l	r	b	t, s
Dattier de Beyrouth:														
Lenoir								l	cy	l	l	ob	w	t, s, r
Deacon Superb:														
Own roots				½		27	.9300	l	cy	c	l	ob	w	t
Diamant:														
Own roots				6		22	.6225	m	t	c	l	r	w	t, s
Dodrelabi:														
Own roots	2	2		3		21.8	.4200	m	r	l	l	r	b	t, s
Aramon × Rupestris Ganzin, No. 1								m	r	l	l	r	b	t, s
Dog Ridge	60	10	11	6	2	16.7	.6990	m	r	l	l	r	b	t, s
Herbemont		8	12		4	18.8	.7375	m	r	l	l	r	b	t, s
Lenoir	40	10	12	1½	9	18.9	.6540	m	r	l	l	r	b	t, s
Mourvedre × Rupestris, No. 1202			3			18	.8437	m	r	l	l	r	b	t, s
Rupestris St. George	30	10	28		12	19.6	.5700	m	r	l	l	r	b	t, s
Solonis × Riparia, No. 1616			8	3	5	20	.7600	m	r	l	l	r	b	t, s
Taylor Narbonne	50	3	9			20.2	.6545	m	r	l	l	r	b	t, s
Drnekusa:														
Own roots		3	25	25	6	22.3	.5661	m	t	l	l	ob	b	t, s
Dronkane:														
Lenoir	10	2	13			22.8	.8348	v, l	l	l	l	ob	w	t, s
Rupestris des Caussettes				8		27	.7500	v, l	l	l	l	ob	w	t, s
Duc de Magenta:														
Rupestris St. George	15	20	3		3	23.5	.5231	l	l	l	l	ob	w	t, s
Duc de Malakoff:														
Own roots		1	4	7	8	24.8	.7106	l	t	m	l	r	w	t, s
Emathia:														
Dog Ridge								m	t	l	l	o	w	t, s, st
Lenoir		4	5			23	.5737	m	t	l	l	o	w	t, s, st
Emperor:														
Lenoir								l	t	l	l	r	b	t, s
Rupestris St. George								l	t	l	l	r	b	t, s
Erz Roumli:														
Lenoir														
Etraire de l'Adhui:														
Own roots					7	27	1.0125	m	m	c	m	ob	b	w
Fajoumi Jaune:														
Lenoir	6		5			21.2	.8095	l	cy	l	l	ob	w	t, s
Rupestris St. George			2	1½		20	.6445	l	cy	l	l	ob	w	t, s
Faphly:														
Lenoir	25	10	13		15	19.7	.7369	v, l	cy	l	l	ob	r	t, s, st
Riparia × Rupestris, No. 3309			8			27	.6367	v, l	cy	l	l	ob	r	t, s, st
Rupestris St. George		2	2½			26.6	.7500	v, l	cy	l	l	ob	r	t, s, st

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Feher Goher Noir:						*P. cent.*								
Own roots	15	12	10	35	....	23	0.7406	l	cy	c	l	o	b	t, s, w
Feher Som:														
Lenoir	10	5	6	....	12	24.5	.8775	l	cy	c	l	o	b	t, s, w
Rupestris St. George	....	....	....	4	....	29	.6150	l	cy	c	l	o	b	t, s, w
Feher Szagos:														
Adobe Giant	3	35	10	29	19	27	.5205	l	t	l	l	o	w	t, s, r
Aramon × Rupestris Ganzin, No. 1	40	30	8	1	20	22.1	.5745	l	t	l	l	o	w	t, s, r
Dog Ridge	30	25	3	20	9	24.5	.6230	l	t	l	l	o	w	t, s, r
Herbemont	10	4	¼	3	....	25.2	.6076	l	t	l	l	o	w	t, s, r
Lenoir	20	10	2	3	....	23.1	.5300	l	t	l	l	o	w	t, s, r
Mourvedre × Rupestris, No. 1202	40	20	4	9	4	23.8	.5320	l	t	l	l	o	w	t, s, r
Riparia Gloire	20	30	8	20	5	23.6	.5260	l	t	l	l	o	w	t, s, r
Riparia × Rupestris, No. 101	40	40	5	15	....	23.5	.5043	l	t	l	l	o	w	t, s, r
Riparia × Rupestris, No. 3309	50	20	30	31	....	20.5	.5700	l	t	l	l	o	w	t, s, r
Rupestris Martin	6	....	½	....	....	26	.4575	l	t	l	l	o	w	t, s, r
Rupestris St. George	40	40	10	25	6	21.6	.5535	l	t	l	l	o	w	t, s, r
Salt Creek	15	12	½	6	0	24.1	.5081	l	t	l	l	o	w	t, s, r
Solonis × Riparia, No. 1616	40	3	20	28	9	21.2	.4990	l	t	l	l	o	w	t, s, r
Taylor Narbonne	10	15	6	28	3	27.4	.4890	l	t	l	l	o	w	t, s, r
Ferrara:														
Herbemont	25	15	....	....	....	23.6	.5812	v l	l	l	l	ob	b	t, s, st
Lenoir	....	12	....	....	....	19	.7575	v l	l	l	l	ob	b	t, s, st
Fintendo:														
Own roots	....	....	....	....	....	23.5	.7950	m	cy	c	m	ob	b	t, s, w
Dog Ridge	30	5	12	6	2	21.9	.7695	m	cy	c	m	ob	b	t, s, w
Lenoir	25	18	8	4	27	22.1	.7860	m	cy	c	m	ob	b	t, s, w
Rupestris St. George	30	5	14	1½	23	22	.8175	m	cy	c	m	ob	b	t, s, w
Taylor Narbonne	35	8	9	....	10	22.4	.7175	m	cy	c	m	ob	b	t, s, w

Flame Tokay:													
Own roots	1	2	3	25		21.4	.5212	l	t	c	l	ob	r	t, s
Canada			24			25	.4800	l	t	c	l	ob	r	t, s
Dog Ridge	30	12	18			20.8	.6600	l	t	c	l	ob	r	t, s
Lenoir	8		14			21.6	.5250	l	t	c	l	ob	r	t, s
Monticola × Riparia, No. 554			22			22	.5230	l	t	c	l	ob	r	t, s
Monticola × Riparia, No. 18804			18			27	.7575	l	t	c	l	ob	r	t, s
Monticola × Riparia, No. 18808								l	t	c	l	ob	r	t, s
Monticola × Riparia, No. 18185			18			26	.5850	l	t	c	l	ob	r	t, s
Riparia à Grandes Feuilles			11			24	.4875	l	t	c	l	ob	r	t, s
Riparia × Rupestris, No. 101	30	25	6			22.1	.5950	l	t	c	l	ob	r	t, s
Riparia × Rupestris, No. 3309	30	15	15			21.9	.6225	l	t	c	l	ob	r	t, s
Do								l	t	c	l	ob	r	t, s
Rupestris Martin			8			21	.4800	l	t	c	l	ob	r	t, s
Salt Creek			4			24	.5325	l	t	c	l	ob	r	t, s
Taylor Narbonne			13			26	.5175	l	t	c	l	ob	r	t, s
Folle Blanche:														
Rupestris St. George	20	15		4	3	21.7	.8175	m	l	l	m	r	w	w
Foster:														
Own roots	25		4			26	.4612	m	t	c	l	r	w	t, s, w
Lenoir		10	4	7	2	23.5	.5119	m	t	c	l	r	w	t, s, w
Riparia Gloire	6	7	3	8	15	25.4	.5535	m	t	c	l	r	w	t, s, w
Rupestris St. George	20	12	8	15	15	25.6	.5920	m	t	c	l	r	w	t, s, w
Frankenthal Precoce:														
Herbemont								l	l	m	l	r	b	s, t, w
Lenoir	15	2	4			24.1	.7350	l	l	m	l	r	b	s, t, w
Monticola × Riparia, No. 18808		3	3	15		23	.6425	l	l	m	l	r	b	s, t, w
Monticola × Riparia, No. 18815			4	12		24.5	.6600	l	l	m	l	r	b	s, t, w
Rupestris St. George	20	1				25.4	.6487	l	l	m	l	r	b	s, t, w
Solonis × Othello				8		28	.7125	l	l	m	l	r	b	s, t, w
Solonis × Riparia, No. 1616			4	2		20.5	.6900	l	l	m	l	r	b	s, t, w
Fredericton:														
Dog Ridge								m	t	l	l	ob	b	s, t
Lenoir	8		7			21.8	.8025	m	t	l	l	ob	b	s, t
Rupestris St. George								m	t	l	l	ob	b	s, t
Fresa de Monferat:														
Own roots				½		26	.8925	m	cy	l	m	ob	b	w
Gamay de Bourgogne:														
Own roots				½		23	.8025	m	cy	c	m	r	b	w
Dog Ridge	25		9½	4		25.9	.9525	m	cy	c	m	r	b	w
Lenoir	20		6		2	24.8	1.0762	m	cy	c	m	r	b	w
Rupestris St. George	15	3				25.7	.9712	m	cy					
Gamay Teinturier:														
Own roots		2	1	5	½	28	.6581	s	cy	c	s	r	b	w
Dog Ridge	50	3				26.6	.7912	s	cy	c	s	r	b	w
Lenoir	30	3	9		15	24.7	.8500	s	cy	c	s	r	b	w
Rupestris St. George	50	8	12	1	14	26.9	.9225	s	cy	c	s	r	b	w
Taylor Narbonne	40	2				28.1	.7420	s	cy	c	s	r	b	w
Gerwürz Traminer:														
Own roots		4	1	3	9	24.9	.5625	s	cy	c	l	r	w	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Golden Champion:						*P. cent.*								
Own roots		2		20		25.9	0.8512	m	t	c	l	r	w	s, t
Do	8		2			25.6	.5212	m	t	c	l	r	w	s, t
Dog Ridge	30	3	18	4	1	20	.8385	m	t	c	l	r	w	s, t
Lenoir	60	15	4	2	18	20.5	.7240	m	t	c	l	r	w	s, t
Rupestris St. George	25	8	6	1	6	20.2	.8300	m	t	c				
Golden Hamburg:														
Lenoir								m	cy	c	l	r	w	s, t
Golden Queen:														
Lenoir								m	t	c	l	r	w	s, t
Goolabie:														
Own roots	40	15	6	7		23.8	.5831	m l	l	l	l	ob	b	s, t, w
Gradiska:														
Own roots				2½	3	20.5	.8037	m l	l	l	l	ob	w	s, t
Dog Ridge	40	15	12	3		21.1	.6056	m l	l	l	l	ob	w	s, t
Lenoir	30		13	4	8	18.6	.6450	m l	l	l	l	ob	w	s, t
St. George	20	10	19	⅓		22.7	.6349	m l	l	l	l	ob	w	s, t
Taylor Narbonne	20	6	7			21	.6250	m l	l	l	l	ob	w	s, t
Green Hungarian:														
Own roots	12	10	2	18		22.1	.5605	m l	t	l	l	r	w	w
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554-5)								m l	t	l	l	r	w	w
Aramon × Rupestris Ganzin, No. 1	15	5	9		4	18.1	.5835	m l	t	l	l	r	w	w
Aramon × Rupestris Ganzin, No. 2			3	2	2	18.8	.7375	m l	t	l	l	r	w	w
Berlandieri × Riparia, No. 420A								m l	t	l	l	r	w	w
Constantia					3	21	.7125	m l	t	l	l	r	w	w
Dog Ridge	40	12	14	5	19	19.8	.7170	m l	t	l	l	r	w	w
Herbemont	30	10	2			17.1	.6717	m-l	t	l	l	r	w	w
Lenoir	40	8	6	4	8	20.8	.7460	m-l	t	l	l	r	w	w
Monticola × Riparia, No. 18808			4	2	3	22	.7945	m-l	t	l	l	r	w	w
Mourvedre × Rupestris, No. 1202	30	3			4	20.6	.5626	m-l	t	l	l	r	w	w

Riparia × Rupestris, No. 101	40	5	8	1	18	20.6	.7185	m-l	t	l	l	r	w	w
Riparia × Rupestris, No. 3306	....	....	3	....	5	19.5	.7725	m-l	t	l	l	r	w	w
Riparia × Rupestris, No. 3309	....	10	....	....	5	21.3	.7325	m-l	t	l	l	r	w	w
Rupestris Martin	....	....	....	....	....	....	....	m-l	t	l	l	r	w	w
Rupestris Mission	....	....	....	....	4	22	.8100	m-l	t	l	l	r	w	w
Rupestris St. George	30	4	4	4	2	19	.7435	m-l	t	l	l	r	w	w
Salt Creek	....	12	....	....	4	20.4	.6470	m-l	t	l	l	r	w	w
Solonis Robusta	....	....	4	....	....	21.5	.8212	m-l	t	l	l	r	w	w
Solonis × Othello, No. 1613	....	....	8	....	5	21	.8137	m-l	t	l	l	r	w	w
Solonis × Riparia, No. 1616	25	10	3	....	....	17.8	.7575	m-l	t	l	l	r	w	w
Taylor Narbonne	50	10	11	4	4	19.6	.7290	m-l	t	l	l	r	w	w
Grenache:														
Own roots	10	30	20	32	30	24	.7245	m-l	t	c	m	ob	b	t, w
Dog Ridge	40	12	15	2	....	22.5	.8794	m-l	t	c	m	ob	b	t, w
Lenoir	50	15	18	11	36	22.8	.7800	m-l	t	c	m	ob	b	t, w
Rupestris St. George	40	3	4	¾	23	24	.9075	m-l	t	c	m	ob	b	t, w
Taylor Narbonne	50	5	11	....	2	24.8	.7170	m-l	t	c	m	ob	b	t, w
Gros Blanc de Lausanne:														
Lenoir	20	8	11	....	17	22.2	.5250	m	t	c	m	ob	w	w
Solonis × Othello	....	2	....	....	....	23.3	.4950	m	t	c	m	ob	w	w
Gros Guillaume:														
Lenoir	....	....	....	....	1½	28	.5250	m	r	c	l	r	b	t, s
Gros Manzenc:														
Own roots	½	....	⅛	8	....	25.6	.5091	m	cy	l	m	r	b	w
Gros Maroc:														
Own roots	....	....	....	....	....	21.5	.8250	m	t	c	l	ob	b	s, t, st
Gros Verdot:														
Own roots	....	....	....	½	....	21	.9000	m	cy	c	l	r	b	w
Dog Ridge	35	20	....	35	12	23.5	.8118	m	cy	c	l	r	b	w
Do	20	3	5	....	....	23.1	1.0075	m	cy	c	l	r	b	w
Lenoir	40	15	12	....	31	20.7	.7181	m	cy	c	l	r	b	w
Do	12	12	....	4	2	24.1	.5962	m	cy	c	l	r	b	w
Rupestris St. George	25	15	....	20	15	23.8	.8081	m	cy	c	l	r	b	w
Do	30	10	14	6	38	22.5	.8445	m	cy	c	l	r	b	w
Taylor Narbonne	20	5	9	....	....	22	.7108	m	cy	c	l	r	b	w
Hebron:														
Lenoir	3	5	8	....	....	22.3	.5825	m-l	t	l	m	r	w	w
Rupestris St. George	....	....	....	2	....	21	.7875	m-l	t	l	m	r	w	w
Solonis × Othello, No. 1613	....	....	....	1½	....	20	.7500	m-l	t	l	m	r	w	w
Huasco:														
Own roots	....	6	2	4	....	26	.6196	m	t	l	l	o	w	s, t, r
Aramon × Rupestris Ganzin, No. 1	15	10	5	3	2	26	.5265	m	t	l	l	o	w	s, t, r
Do	....	....	10	....	....	22	.6450	m	t	l	l	o	w	s, t, r
Aramon × Rupestris Ganzin, No. 2	....	....	....	12	....	28	.5550	m	t	l	l	o	w	s, t, r
Australis	....	....	4	....	....	25	.5850	m	t	l	l	o	w	s, t, r
Berlandieri × Riparia, No. 420A	....	....	3	5	....	29.5	.4625	m	t	l	l	o	w	s, t, r
Lenoir	10	8	3	½	....	26.5	.6277	m	t	l	l	o	w	s, t, r
Monticola × Riparia, No. 18808	....	....	....	4	....	30	.6150	m	t	l	l	o	w	s, t, r
Mourvedre × Rupestris, No. 1202	15	6	3	19	3	26	.5415	m	t	l	l	o	w	s, t, r
Riparia Gloire	....	....	½	12	1	26	.5975	m	t	l	l	o	w	s, t, r
Riparia × (Cordifolia × Rupestris, No. 106-8)	....	....	6	....	....	25.5	.5025	m	t	l	l	o	w	s, t, r

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Huasco—Continued.						*P. cent.*								
Riparia × Rupestris, No. 101	4		1	2		29.9	0.5717	m	t	l	l	o	w	s, t, r
Do		2				26.3	.6225	m	t	l	l	o	w	s, t, r
Riparia × Rupestris, No. 3309			3	2		24.5	.5262	m	t	l	l	o	w	s, t, r
Rupestris St. George	15	11	5	8	4	27	.6000	m	t	l	l	o	w	s, t, r
Solonis Robusta				5		29	.5500	m	t	l	l	o	w	s, t, r
Solonis × Riparia, No. 1616			½			28	.4950	m	t	l	l	o	w	s, t, r
Taylor Narbonne		5		½	½	27.2	.6750	m	t	l	l	o	w	s, t, r
Viala				8		27	.5100	m	t	l	l	o	w	s, t, r
Hunisa:														
Adobe Giant			2			28	.5175	l	cy	l	l	o	b	s, t, st
Australis			12	35		20	.7725	l	cy	l	l	o	b	s, t, st
Berlandieri × Riparia, No. 420A				15				l	cy	l	l	o	b	s, t, st
Constantia			12	22		21	.5325	l	cy	l	l	o	b	s, t, st
Dog Ridge								l	cy	l	l	o	b	s, t, st
Riparia × Rupestris, No. 3309								l	cy	l	l	o	b	s, t, st
Solonis Robusta			14	12		21	.5775	l	cy	l	l	o	b	s, t, st
Solonis × Riparia, No. 1616								l	cy	l	l	o	b	s, t, st
Hunisa (S. P. I. No. 6124):														
Own roots								l	cy	l	l	o	b	s, t, st
Hunisa (S. P. I. No. 8583):														
Own roots	10					18.2	1.0125	l	cy	l	l	o	b	s, t, st
Hutab:														
Own roots					2	22	.5850	m	l	l	m	o	w	t
Hycales:														
Lenoir	15	10	13		9	22	.6850	l	t	l	m	r	w	s, t, w
Rupestris Mission								l	t	l	m	r	w	s, t, w
Rupestris St. George		2	19			23	.4815	l	t	l	m	r	w	s, t, w
Solonis × Othello, No. 1613			9	12		25.2	.4762	l	t	l	m	r	w	s, t, w
Imperial:														
Own roots				8	5	20.5	.6442	m	t	c	m-l	r	b	t, s, w

Inzolia Bianca:														
Lenoir	8	5	5	....	2	23.1	.6267	m-l	t	c	m	ob	w	t, w
Rupestris St. George	....	1½	10	....	....	23	.6950	m-l	t	c	m	ob	w	t, w
Johannisberger:														
Own roots	2	....	4	15	3	25.2	.6562	s	cy	c	s	r	w	w
Jura Muscat:														
Lenoir	1½	5	1	2	2	26.5	.6555	m	cy	c	s	r	r	t, w
Riparia Gloire	12	3	....	28	6	27.7	.6400	m	cy	c	s	r	r	t, w
Rupestris St. George	16	6	3	20	4	28.8	.7095	m	cy	c	s	r	r	t, w
Kabbajuk:														
Own roots	30	....	....	....	....	17.6	.6712	m	t	c	m-l	ob	w	t, s
Kadarka:														
Own roots	2	35	8	35	20	22.7	.5850	l	cy	c	s	r	b	w
Dog Ridge	40	30	10	30	25	23.4	.6644	l	cy	c	s	r	b	w
Lenoir	15	30	4	2	22	23.7	.4950	l	cy	c	s	r	b	w
Riparia Gloire	8	15	5	18	7	23.9	.5365	l	cy	c	s	r	b	w
Rupestris St. George	20	40	10	36	26	24.8	.4305	l	cy	c	s	r	b	w
Kechmish-Aly-Blanc:														
Lenoir	2	....	2½	....	....	24.1	.7425	l	t	l	m	o	w	t, r, w
Solonis × Othello, No. 1613	....	....	....	....	....	....	....	l	t	l	m	o	w	t, r, w
Keropodia:														
Lenoir	20	5	11	....	4	24	.7652	l	t	l	m	o	w	w
Riparia × Rupestris, No. 3309	....	....	....	....	....	....	....	l	t	l	m	o	w	w
Key:														
Herbemont	....	....	....	....	....	....	....	l	t	c	l	r	b	s, t, w
Lenoir	20	3	5	....	35	21.4	.5796	l	t	c	l	r	b	s, t, w
Kleinburger:														
Own roots	4	2	1	½	....	24.9	.6262	s	cy	c	s	r	w	w
Kölner:														
Own roots	3	½	1	10	4	25.3	.6510	m	cy	l	l	r	b	w
Dog Ridge	15	1½	10	....	....	23	.8717	m	cy	l	l	r	b	w
Lenoir	15	8	9½	4	20	22.4	.7765	m	cy	l	l	r	b	w
Rupestris St. George	45	7	12	1	21	21.2	.9210	m	cy	l	l	r	b	w
Taylor Narbonne	15	2	....	....	....	24.3	.4395	m	cy	l	l	r	b	w
Kuristi Mici:														
Lenoir	....	3	6	....	....	22.1	.5550	m	t	l	l	ob	r	s, t
Kurtelaska:														
Own roots	....	....	⅛	4	....	21.2	.5250	l	cy	l	m	ob	w	w
Do	50	....	....	....	....	20.3	.7050	l	cy	l	m	ob	w	w
Lahntraube:														
Own roots	15	7	½	....	....	23.3	.7037	m-l	l	l	l	ob	w	w, s, t
Riparia Gloire	15	8	1	12	....	26	.6944	m-l	l	l	l	ob	w	w, s, t
Rupestris St. George	30	10	8	6	3	24.3	.7350	m-l	l	l	l	ob	w	w, s, t
Leani Zolo:														
Rupestris St. George	30	40	8	30	18	22.3	.5130	m	cy	c	s	r	w	w
Lignan Blanc:														
Own roots	....	....	....	3	....	27.5	.8475	s	cy	c	s	r	w	w
Aramon × Rupestris Ganzin, No. 1	40	30	5	43	0	22.3	.6094	s	cy	c	s	r	w	w
Dog Ridge	10	6	....	....	....	22.6	.6187	s	cy	c	s	r	w	w
Do	42	35	14	47	7	22.6	.6388	s	cy	c	s	r	w	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Lignan Blanc—Continued.						*P. cent.*								
Hotporup	....	6	4	....	....	24.1	.6175	s	cy	c	s	r	w	w
Lenoir	25	5	3	1½	5	23.2	.6660	s	cy	c	s	r	w	w
Do.	28	10	2	2	4	21.3	.6990	s	cy	c	s	r	w	w
Mourvedre × Rupestris, No. 1202	....	....	....	....	....	....	....	s	cy	c	s	r	w	w
Do.	25	30	3	41	8	22.3	.6315	s	cy	c	s	r	w	w
Riparia Gloire	8	35	8	40	11	24.8	.6615	s	cy	c	s	r	w	w
Riparia × Rupestris, No. 101	30	30	20	6	0	22.9	.6276	s	cy	c	s	r	w	w
Riparia × Rupestris, No. 3309	20	50	25	13	4	23	.6135	s	cy	c	s	r	w	w
Rupestris St. George	40	10	10	....	10½	22.8	.6950	s	cy	c	s	r	w	w
Do.	40	30	5	18	26	22.4	.6185	s	cy	c	s	r	w	w
Solonis × Othello	....	4	....	....	....	23	1.0462	s	cy	c	s	r	w	w
Solonis × Riparia, No. 1616	10	20	15	12	0	24	.5174	s	cy	c	s	r	w	w
Taylor Narbonne	6	40	10	23	0	22.4	.5681	s	cy	c	s	r	w	w
Do.	50	5	3	....	....	24.2	.6150	s	cy	c	s	r	w	w
Listan:														
Own roots	10	10	15	21	8	23.6	.5090	l	l	l	m	r	w	w, s, t
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554-5)	....	....	6	1	6	23	.6300	l	l	c	m	r	w	w, s, t
Aramon × Rupestris Ganzin, No. 1	40	40	26	....	8	23.3	.5806	l	l	c	m	r	w	w, s, t
Aramon × Rupestris Ganzin, No. 2	....	....	3	....	2	24.5	.6187	l	l	c	m	r	w	w, s, t
Berlandieri × Riparia, No. 420B	....	5	....	....	....	23.7	.4800	l	l	c	m	r	w	w, s, t
Columbaud × Riparia, No. 2502	....	....	....	3	....	22	.5025	l	l	c	m	r	w	w, s, t
Constantia	....	....	4	2	8	23.8	.6375	l	l	c	m	r	w	w, s, t
Cornucopia	....	4	4	....	....	23.3	.3475	l	l	c	m	r	w	w, s, t
De Grassett	....	6	....	6	....	25.6	.4950	l	l	c	m	r	w	w, s, t
Dog Ridge	30	10	17	8	12	23.3	.6375	l	l	c	m	r	w	w, s, t
Herbemont	15	12	2	....	4	22.3	.5344	l	l	c	m	r	w	w, s, t
Lenoir	6	5	9	....	5	23.1	.5450	l	l	c	m	r	w	w, s, t
Monticola × Riparia, No. 18804	....	5	1	26	....	23.7	.4495	l	l	c	m	r	w	w, s, t
Monticola × Riparia, No. 18808	....	....	1½	....	4	24.5	.6070	l	l	c	m	r	w	w, s, t
Mourvedre × Rupestris, No. 1202	30	10	13	2	15	22.9	.6630	l	l	c	m	r	w	w, s, t

Riparia × Rupestris, No. 101	25	10	16	2	2	22.3	.6300	l	l	c	m	r	w	w, s, t
Do						21	.6300	l	l	c	m	r	w	w, s, t
Riparia × Rupestris, No. 101–14			2			24	.6487	l	l	l	m	r	w	w, s, t
Riparia × Rupestris, No. 3306			3		5	24	.6750	l	l	l	m	r	w	w, s, t
Riparia × Rupestris, No. 3309				19		23	.6255	l	l	l	m	r	w	w, s, t
Do	60	15	9		5	23.3	.6660	l	l	l	m	r	w	w, s, t
Rupestris Martin	30	10	14		8	24	.6287	l	l	l	m	r	w	w, s, t
Rupestris Metallica			5		3	25	.6112	l	l	l	m	r	w	w, s, t
Rupestris Mission					2	25	.5475	l	l	l	m	r	w	w, s, t
Rupestris St. George								l	l	l	m	r	w	w, s, t
Do	6	3	2	½		22.7	.5169	l	l	l	m	r	w	w, s, t
Rupestris × Berlandieri, No. 219A				1½		23	.5250	l	l	l	m	r	w	w, s, t
Salt Creek	15	8	5		10	25	.6075	l	l	l	m	r	w	w, s, t
Solonis Robusta		6	4			24.5	.4575	l	l	l	m	r	w	w, s, t
Do			5	2	4	23.3	.6800	l	l	l	m	r	w	w, s, t
Solonis × Othello			1			23	.4537	l	l	l	m	r	w	w, s, t
Solonis × Othello, No. 1613			1½	2	4	24	.6450	l	l	l	m	r	w	w, s, t
Solonis × Riparia, No. 1616	15	50	19	3		24.1	.6469	l	l	l	m	r	w	w, s, t
Taylor Narbonne	30	10	25	3	8	24.6	.5845	l	l	l	m	r	w	w, s, t
Valencia		3	3			24.2	.4825	l	l	l	m	r	w	w, s, t
Luglienga Nera:														
Adobe Giant	30	10	4	26		22.4	.5931	m-l	r	c	l	ob	b	w, s, t
Dog Ridge	45	25		6	8	24	.5594	m-l	r	c	l	ob	b	w, s, t
Riparia × Rupestris, No. 3309				2		24	.6825	m-l	r	c	l	ob	b	w, s, t
Rupestris St. George	20	25	5	43	6	27	.4740	m-l	r	c	l	ob	b	w, s, t
Macunier:														
Own roots	1½			4	1	25	.6917	s	cy	c	s	ob	b	w
Madeleine Angevine:														
Own roots		3			2	22.6	.4950	m-l	t	l	m	ob	w	w, t
Dog Ridge	15	2	12		1	24.5	.5392	m-l	t	l	m	ob	w	w, t
Lenoir	15	2	1		2½	22.3	.5120	m-l	t	l	m	ob	w	w, t
Rupestris St. George	6	2	2		3	24.7	.5756	m-l	t	l	m	ob	w	w, t
Madeleine Blanche:														
Own roots						25.9	.6975	m-l	t	l	m	ob	w	w, t
Madeleine d'Ambre:														
Dog Ridge		½	16	½		23.5	.7800	m-l	t	l	m	ob	w	w, t
Lenoir	6	2	½		5	20.9	.7294	m-l	t	l	m	ob	w	w, t
Rupestris St. George	3	2			3	21.3	.8057	m-l	t	l	m	ob	w	w, t
Madeleine Rose:														
Own roots				2		22	.7500	m-l	t	l	m	ob	w	w, t
Riparia Gloire			2			25.5	.5587	m-l	t	l	m	ob	w	w, t
Madeleine Royale:														
Own roots				4		31	.7500	m-l	t	l	m	ob	w	w, t
Dog Ridge	25	4			4	27.4	.5725	m-l	t	l	m	ob	w	w, t
Lenoir	10	2	¼		3	25.7	.6600	m-l	t	l	m	ob	w	w, t
Malaga:														
Own roots	20	25	2	7	9	23.9	.5205	l	t	m	l	ob	w	s, t, r
Adobe Giant	60	70	15	42	30	22.6	.5550	l	t	m	l	ob	w	s, t, r
Aramon × Rupestris Ganzin, No. 1	50	40	3	43	8	22.7	.6045	l	t	m	l	ob	w	s, t, r
Canada								l	t	m	l	ob	w	s, t, r
Constantia			10			23	.5775	l	t	m	l	ob	w	s, t, r

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Malaga—Continued.						*P. cent.*								
Dog Ridge	60	40	10	20	32	23.1	0.6150	l	t	m	l	ob	w	s, t, r
Herbemont	2	20	2	....	....	24.8	.6093	l	t	m	l	ob	w	s, t, r
Lenoir	30	20	20	4	2	22.8	.4392	l	t	m	l	ob	w	s, t, r
Mourvedre × Rupestris, No. 1202	45	30	15	45	12	22.9	.5950	l	t	m	l	ob	w	s, t, r
Riparia Gloire	50	25	15	44	18	22.7	.6489	l	t	m	l	ob	w	s, t, r
Riparia × Rupestris, No. 101	40	70	20	43	10	23.6	.6120	l	t	m	l	ob	w	s, t, r
Riparia × Rupestris, No. 3309	40	30	30	22	18	23.7	.5995	l	t	m	l	ob	w	s, t, r
Rupestris Martin	11	7	½	1½	1	22.5	.4790	l	t	m	l	ob	w	s, t, r
Rupestris St. George	40	30	15	30	20	22.9	.5715	l	t	m	l	ob	w	s, t, r
Salt Creek	30	15	5	31	8	22.8	.6165	l	t	m	l	ob	w	s, t, r
Solonis × Riparia, No. 1616	50	70	35	....	12	22.7	.6006	l	t	m	l	ob	w	s, t, r
Taylor Narbonne	60	60	15	33	4	23.9	.5600	l	t	m	l	ob	w	s, t, r
Malaga Blanc:														
Lenoir	15	18	3	....	....	26.9	.5425	m-l	l	l	m	ob	w	w
Riparia Gloire	4	15	1	7	4	25.3	.5790	m-l	l	l	m	ob	w	w
Rupestris St. George	15	25	4	30	26	26.5	.5720	m-l	cy	c	s	r	b	w
Malbeck:														
Own roots	....	2	2	22	3	24	.8025	s	t	c	l	ob	b	s, t, w
Malvasia:														
Own roots	2	6	2	27	....	26	.5556	s	t	c	l	ob	b	s, t, w
Lenoir	....	....	....	....	....	....	....	s	t	c	l	ob	b	s, t, w
Rupestris St. George	....	....	....	....	3	24	.9375	s	t	c	l	ob	b	s, t, w
Malvasia de Broglio:														
Own roots	4	....	....	15	....	23.1	.6375	l	t	l	m	r	w	w
Malvasia Rosaria:														
Own roots	15	8	2	12	....	24.5	.7162	l	t	c	l	ob	b	w
Dog Ridge	40	50	5	40	0	23.4	.7125	l	t	c	l	ob	b	w
Herbemont	....	....	4½	....	....	21	.8625	l	t	c	l	ob	b	w
Lenoir	25	15	½	....	6	24.3	.6354	l	t	c	l	ob	b	w
Riparia Gloire	30	40	5	20	26	22.4	.6495	l	t	c	l	ob	b	w
Rupestris St. George	25	25	10	10	0	24.1	.6469	l	t	c	l	ob	b	w

Malvasia Rovasenda:														
Own roots	10	20	10	3	3	25	.6862	l	t	c	l	ob	b	w
Mamelon:														
Own roots	......	......	......	......	6	21	.7200	l	t	c	l	ob	w	s, t
Dog Ridge	4	8	24	6	......	25.2	.6787	l	t	c	l	ob	w	s, t
Lenoir	20	12	......	4	37	24.1	.6360	l	t	c	l	ob	w	s, t
Rupestris St. George	15	10	......	......	4	24.3	.6200	l	t	c	l	ob	w	s, t
Taylor Narbonne	15	8	10	......	7	26.6	.6300	l	t	c	l	ob	w	s, t
Valencia	......	......	......	5	......	23	.7500	l	t	c	l	ob	w	s, t
Mantuo de Pilas:														
Own roots	20	20	20	21	10	22.2	.5715	l	t	l	m	ob	w	s, t, w
Adobe Giant	30	40	15	39	16	23.1	.4980	l	t	l	m	ob	w	s, t, w
Aramon × Rupestris Ganzin, No. 1	45	50	8	28	20	22.7	.3903	l	t	l	m	ob	w	s, t, w
Dog Ridge	25	30	15	26	3	21.5	.3660	l	t	l	m	ob	w	s, t, w
Herbemont	5	2	¼	......	1	24.1	.5040	l	t	l	m	ob	w	s, t, w
Lenoir	40	30	3	2½	3	21.3	.3255	l	t	l	m	ob	w	s, t, w
Do	12	15	6	1	23	21.6	.5565	l	t	l	m	ob	w	s, t, w
Mourvedre × Rupestris, No. 1202	45	45	5	13	18	22.2	.4410	l	t	l	m	ob	w	s, t, w
Riparia Gloire	20	40	5	28	18	23.6	.3200	l	t	l	m	ob	w	s, t, w
Riparia × Rupestris, No. 101	30	50	15	12	6	25.6	.3870	l	t	l	m	ob	w	s, t, w
Riparia × Rupestris, No. 3309	45	50	20	13	15	23.1	.4525	l	t	l	m	ob	w	s, t, w
Rupestris Martin	10	6	1½	1	2	22.5	.5100	l	t	l	m	ob	w	s, t, w
Rupestris St. George	45	50	5	30	......	22.9	.3494	l	t	l	m	ob	w	s, t, w
Do	15	2	7	......	15	22.8	.4800	l	t	l	m	ob	w	s, t, w
Salt Creek	15	40	¼	5	4	22.5	.4216	l	t	l	m	ob	w	s, t, w
Solonis × Riparia, No. 1616	40	50	30	......	17	23	.3787	l	t	l	m	ob	w	s, t, w
Taylor Narbonne	40	15	10	......	5	24.1	.4087	l	t	l	m	ob	w	s, t, w
Marascina:														
Own roots	1	......	......	15	......	23.3	.6675	m	cy	m	m	r	w	w
Lenoir	......	......	......	......	......	......	......	m	cy	m	m	r	w	w
Maraville de Malaga:														
Lenoir	8	3	14	......	8	22.5	.5681	v, l	t	m	m	r	b	s, t, w
Riparia × Rupestris, No. 3309	......	......	6	......	......	22	.5020	v, l	t	m	m	r	b	s, t, w
Solonis × Othello, No. 1613	......	......	7	15	......	23.5	.4162	v, l	t	m	m	r	b	s, t, w
Marmola Tobead:														
Own roots	......	......	......	......	......	22	1.0500	m	t	l	m	ob	b	s, t, w
Marmora:														
Lenoir	30	5	2	3	2	22.9	.4630	m-l	t	m	l	r	w	st, t
Riparia Gloire	2	4	3	32	12	24.5	.4395	m-l	t	m	l	r	w	st, t
Rupestris St. George	12	7	3	25	6	24.8	.4680	m-l	t	m	l	r	w	st, t
Marsanne:														
Own roots	15	18	8	10	25	26.2	.5595	m	t	l	s	r	w	w
Marzemino:														
Own roots	3	......	¼	5	......	24	.5050	m	l	m	m	r	b	w
Do	1	......	......	......	......	26	.6025	m	l	m	m	r	b	w
Mataro:														
Own roots	......	......	......	......	......	24	.6075	m	cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	55	38	9	2	4	21.7	.6810	m	cy	c	m	r	b	w
Dog Ridge	50	12	......	16	2½	22.7	.7481	m	cy	c	m	r	b	w
Herbemont	45	......	......	3	8	19.6	.8325	m	cy	c	m	r	b	w
Lenoir	60	5	......	4	......	21.9	.7675	m	cy	c	m	r	b	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Mataro—Continued.						*P. cent.*								
Mourvedre × Rupestris, No. 1202	50	5	6	....	4	21.1	0.8587	m	cy	c	m	r	b	w
Rupestris Martin	40	8	2	16	....	21.4	.8212	m	cy	c	m	r	b	w
Rupestris St. George	50	12	....	15	10	21.7	.7200	m	cy	c	m	r	b	w
Salt Creek	45	12	....	4	4	22	.8719	m	cy	c	m	r	b	w
Taylor Narbonne	30	10	8	10	4	22.6	.7350	m	cy	c	m	r	b	w
Melon:														
Dog Ridge	20	20	....	10	15	23.1	.5131	m	r	c	l	ob	w	s, t
Rupestris St. George	15	15	....	15	8	23.5	.5096	m	r	c	l	ob	w	s, t
Merlot:														
Own roots	2	....	2	....	½	24.7	.5950	m	cy	m	s	r	b	w
Meslier:														
Own roots	3	1½	1	....	....	24.7	.9300	s	cy	c	s	r	w	w
Aramon × Rupestris Ganzin, No. 1	6	....	5	....	....	22.4	1.0650	s	cy	c	s	r	w	w
Lenoir	8	3	....	4	20	21.7	1.0918	s	cy	c	s	r	w	w
Rupestris St. George	15	1	5½	1	6	22.8	.9224	s	cy	c	s	r	w	w
Meunier:														
Own roots	4	2	....	2	....	28.4	.6975	s	cy	c	s	r	b	w
Dog Ridge	25	1	16	....	....	25.1	.7050	s	cy	c	s	r	b	w
Lenoir	20	3	5	....	9	21.5	.8344	s	cy	c	s	r	b	w
Rupestris St. George	40	3	29	3	7	28.4	.8160	s	cy	c	s	r	b	w
Meyer, No. 59:														
Dog Ridge	12	5	....	....	....	25.8	.5250	l	t, cy	c	m	ob	w	s, t, w
Lenoir	....	....	6	....	....	22	.5325	l	t, cy	c	m	ob	w	s, t, w
Meyer, No. 60:														
Dog Ridge	30	....	3½	....	....	25.1	.6112	l	t, cy	c	m	ob	w	s, t, w
Lenoir	1	....	4	....	....	22	.7349	l	t, cy	c	m	ob	w	s, t, w
Meyer, No. 65:														
Lenoir	20	8	13	....	19	20.6	.6885	l	t	m	m	r	r	w
Meyer, No. 94:														
Dog Ridge	20	....	....	....	....	21.2	.2400	m-l	cy	m	l	ob	w	s, t
Lenoir	2	½	11	....	....	20.2	.3316	m-l	cy	m	l	ob	w	s, t

Meyer, No. 95:														
Dog Ridge	10	2				21.1	.6150	l	t	l	l	ob	w	s, t
Lenoir	20	3	13			19	.5875	l	t	l	l	ob	w	s, t
Meyer, No. 103:														
Lenoir					5	23	.6000	s	r	c	s	r	b	w
Meyer, No. 107:														
Lenoir		2	9			19	.8637	l	r	c	l	ob	w	s, t
Meyer, No. 116:														
Dog Ridge	5					23.2	.6300	l	l	l	m	r	b	w
Lenoir	3		4			24.1	.5925	l	l	l	m	r	b	w
Meyer, No. 515:														
Dog Ridge	10	2	5½			20.1	.7425	l	t	c	l	ob	b	w
Lenoir	8	15			6½	20.6	.7275	l	t	c	l	ob	b	w
Millenium:														
Aramon × Rupestris Ganzin, No. 1	25	20	11	5	4	23.7	.6885	m-l	t	c	l	r	w	s, t, w
Lenoir	40	3	11		6	23.4	.7237	m-l	t	c	l	r	w	s, t, w
Riparia × Rupestris, No. 101	25	5	2			22.5	.5950	m-l	t	c	l	r	w	s, t, w
Riparia × Rupestris, No. 3309	30					21.9	.7125	m-l	t	c	l	r	w	s, t, w
Solonis × Riparia, No. 1616	30	5	1			22.3	.6825	m-l	t	c	l	r	w	s, t, w
Mission:														
Own roots	30	30	10	45	15	20.2	.5885	l	t	m-c	m	r	b	w, s, t
Adobe Giant	30	20	4	26	12	26.6	.5010	l	t	m-c	m	r	b	w, s, t
Dog Ridge	20	25	5	15	16	26.4	.4889	l	t	m-c	m	r	b	w, s, t
Do	60	15	20		20	21.2	.7500	l	t	m-c	m	r	b	w, s, t
Herbemont	4	10	2			29.4	.4837	l	t	m-c	m	r	b	w, s, t
Do	65	20	12	10	9	21.5	.7295	l	t	m-c	m	r	b	w, s, t
Lenoir	20	30	3	3	1	24.6	.5070	l	t	m-c	m	r	b	w, s, t
Do	50		15	10	15	19.1	.6125	l	t	m-c	m	r	b	w, s, t
Riparia Gloire	15	10	2	20	15	27.2	.4871	l	t	m-c	m	r	b	w, s, t
Rupestris Mission	3	15	2	11	4	25.1	.4605	l	t	m-c	m	r	b	w, s, t
Do		5	10	1	23	22	.7395	l	t	m-c	m	r	b	w, s, t
Rupestris St. George	40	30	10	18	12	26.5	.5450	l	t	m-c	m	r	b	w, s, t
Do	60		19	8	15	23	.5910	l	t	m-c	m	r	b	w, s, t
Salt Creek	20	15	5	3	12	27.1	.5685	l	t	m-c	m	r	b	w, s, t
Do	30	10	16		5	23.5	.6412	l	t	m-c	m	r	b	w, s, t
Molinera Gordo:														
Lenoir	3		5½			23	.5175	t	l	m	l	r	r	s, t
Mondeuse:														
Own roots	15	4	15	3	6	25.4	.6170	m	cy	m	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	45	15	14		4	25.2	.7781	m	cy	m	m	r	b	w
Dog Ridge	50	8	8½	5	3	24.4	.9930	m	cy	m	m	r	b	w
Herbemont	30	20	7	2	3	22.4	.6895	m	cy	m	m	r	b	w
Lenoir	25	20		10	8	21.7	.6991	m	cy	m	m	r	b	w
Mourvedre × Rupestris, No. 1202	40	10	5	2	4	25.4	.8930	m	cy	m	m	r	b	w
Riparia × Rupestris, No. 101	40	12			5	24	.8125	m	cy	m	m	r	b	w
Riparia × Rupestris, No. 3309	40	10	6	3	5	25.4	.9162	m	cy	m	m	r	b	w
Rupestris Martin	50	5	6			20.3	.8750	m	cy	m	m	r	b	w
Rupestris St. George	5	5	15	6	8	21.8	.8220	m	cy	m	m	r	b	w
Salt Creek	60	10			12	23.7	.7700	m	cy	m	m	r	b	w
Solonis × Riparia, No. 1616	25	25	5			23.5	.7600	m	cy	m	m	r	b	w
Taylor Narbonne	35	10	13	9		24.3	.8231	m	cy	m	m	r	b	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Moneca Nero:						*P. cent.*								
Own roots	5	10	4	18		23.8	0.5700	l	t	c	m	r	b	w, t
Mourastel:														
Own roots	3	3	2	8	6	20.2	.8235	m-l	t	m	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	40		19	10	12	19.9	1.0500	m-l	t	m	m	r	b	w
Dog Ridge		10		12		23.1	1.0125	m-l	t	m	m	r	b	w
Herbemont			11	2		20	.8850	m-l	t	m	m	r	b	w
Lenoir					31	24	.8250	m-l	t	m	m	r	b	w
Riparia × Rupestris, No. 101	60	8	15	4	6	22.5	.9330	m-l	t	m	m	r	b	w
Riparia × Rupestris, No. 3309	60	5	12	3	15	22.2	.9825	m-l	t	m	m	r	b	w
Solonis × Riparia, No. 1616	40	25	11	3	2	21.7	.9855	m-l	t	m	m	r	b	w
Taylor Narbonne	60	10	11		12	22.2	.9622	m-l	t	m	m	r	b	w
Mourisco Bianca:														
Own roots	10	6	6	18	2	23	.5490	l	t	l	m	ob	w	t, s, w
Dog Ridge	50	10			8	21	.4450	l	t	l	m	ob	w	t, s, w
Lenoir	60	10			40	19.4	.6725	l	t	l	m	ob	w	t, s, w
Rupestris St. George	25	12	18		30	24.4	.5750	l	t	l	m	ob	w	t, s, w
Taylor Narbonne	40	2	6			23.4	.5300	l	t	l	m	ob	w	t, s, w
Mourisco Preto:														
Own roots	12	10	2	3		25.7	.5662	m	t	c	s	o	b	w
Dog Ridge	50	6	10		2	24.8	.7687	m	t	c	s	o	b	w
Lenoir	40	8	8	2	21	23.3	.8401	m	t	c	s	o	b	w
Rupestris St. George		7	6½	½	6	24.7	.7516	m	t	c	s	o	b	w
Muscadelle du Bordelais:														
Adobe Giant	10	4	2	9	4	25.4	.6615	m-l	l	m	m	r	w	w
Aramon × Rupestris Ganzin, No. 1	12	8	8	2	2	27.3	.5420	m-l	l	m	m	r	w	w
Lenoir	3	5	2	3	3	26.5	.6445	m-l	l	m	m	r	w	w
Mourvedre × Rupestris, No. 1202	15	9	5	8	12	28.9	.5885	m-l	l	m	m	r	w	w
Riparia Gloire	1	4	5	8	4	28.8	.6355	m-l	l	m	m	r	w	w
Riparia × Rupestris, No. 101	20	7	8	19	16	28.2	.5730	m-l	l	m	m	r	w	w
Riparia × Rupestris, No. 3309	20	8	10	15	3	27.7	.5750	m-l	l	m	m	r	w	w
Rupestris St. George	25	6	8	28	4	28.2	.6245	m-l	l	m	m	r	w	w
Solonis × Riparia, No. 1616	10	0	3			30.5	.5772	m-l	l	m	m	r	w	w
Taylor Narbonne	10	½	5	8		32.1	.6450	m-l	l	m	m	r	w	w

Muscat (S. P. I. No. 3063):														
Own roots	15					16.2	.6600	m-l	t, cy	m	m	ob	b	s, t
Muscat Albardiens:														
Own roots	4	1		5	2	23.2	.7569	m-l	l	m	m	ob	b	s, t
Aramon × Rupestris Ganzin, No. 1	8	8	1			27	.5225	m-l	l	m	m	ob	b	s, t
Lenoir	12	3	3	1½	2	24.9	.5125	m-l	l	m	m	ob	b	s, t
Mourvedre × Rupestris, No. 1202	25	10	3	18	20	26.6	.4940	m-l	l	m	m	ob	b	s, t
Riparia Gloire	10	6	2	32	1	26.2	.5580	m-l	l	m	m	ob	b	s, t
Riparia × Rupestris, No. 101	8	12	1	21	6	27.6	.5060	m-l	l	m	m	ob	b	s, t
Riparia × Rupestris, No. 3309	30	0	10	13	8	26.4	.4462	m-l	l	m	m	ob	b	s, t
Rupestris St. George	15	5	8	8	6	28	.5635	m-l	l	m	m	ob	b	s, t
Solonis × Riparia, No. 1616	5	0	1	2		27.1	.4375	m-l	l	m	m	ob	b	s, t
Taylor Narbonne	6	4	5	18		24.7	.4312	m-l	l	m	m	ob	b	s, t
Muscat Bonod:														
Berlandieri × Riparia, No. 420A			13			23	.7500	m	t	l	m-l	o	w	s, t
De Grasset				3		30	.4650	m	t	l	m-l	o	w	s, t
Lenoir	10	2	9½		2	22.3	.6094	m	t	l	m-l	o	w	s, t
Riparia × Rupestris, No. 101						28	.5250	m	t	l	m-l	o	w	s, t
Riparia × Rupestris, No. 3309				14		31	.5475	m	t	l	m-l	o	w	s, t
Rupestris St. George						25	.6750	m	t	l	m-l	o	w	s, t
Solonis Robusta						27	.8325	m	t	l	m-l	o	w	s, t
Valencia				8		28	.5175	m	t	l	m-l	o	w	s, t
Muscat Capusines:														
Own roots				3		29	.8250	l	t	l	m-l	o	b	s, t
Dog Ridge	15					27.2	.6500	l	t	l	m-l	o	b	s, t
Lenoir	40		6			25.3	.7173	l	t	l	m-l	o	b	s, t
Rupestris St. George	40		11		4	24.3	.7575	l	t	l	m-l	o	b	s, t
Muscateller:														
Own roots		5	1	12	6	25.4	.6525	m	cy	c	s	r	w	s, w
Dog Ridge	8	4	15	9	2	28.3	.6555	m	cy	c	s	r	w	s, w
Lenoir	4	4	½	1	2	25.2	.7080	m	cy	c	s	r	w	s, w
Riparia Gloire	1		1	1		25.5	.6200	m	cy	c	s	r	w	s, w
Rupestris St. George	20	3	1	6	10	30.1	.5790	m	cy	c	s	r	w	s, w
Muscat Gros Noir Hatif:														
Own roots	3	½		4		23.7	.6350	m-l	l	l	m-l	o	b	s, t, w
Dog Ridge	25	2	3	9		25	.7540	m-l	l	l	m-l	o	b	s, t, w
Lenoir	20	5	5	1	4	24.4	.7500	m-l	l		m-l	o	b	s, t, w
Rupestris St. George	12	5	7			23.3	.8075	m-l	l	l	m-l	o	b	s, t, w
Taylor Narbonne	30	5	2			24.4	.8525	m-l	l	l	m-l	o	b	s, t, w
Muscat Hamburg:														
Own roots						26.7	.5550	m	l	l	m	o	b	s, t, w
Aramon × Rupestris Ganzin, No. 1			3			27	.5775	m	l	l	m	o	b	s, t, w
Dog Ridge	30	1½	4		2	24.5	.7080	m	l	l	m	o	b	s, t, w
Lenoir	40	2	10	½	2	23	.6285	m	l	l	m	o	b	s, t, w
Monticola × Rupestris		4				28.2	.6075	m	l	l	m	o	b	s, t, w
Riparia × Rupestris, No. 3309		4	2			24.5	.6050	m	l	l	m	o	b	s, t, w
Rupestris St. George	25	12	13			22.7	.6150	m	l	l	m	o	b	s, t, w
Rupestris × Berlandieri, No. 219A		3	2½			26.5	.5625	m	l	l	m	o	b	s, t, w
Taylor Narbonne	15	5				23.8	.6025	m	l	l	m	o	b	s, t ,w
Muscat Hamburg Noir d'Hongrie:														
Own roots	3	2	½	15		23.8	.6918	m	l	l	m	o	b	s, t, w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Muscat Noir d'Hongrie:						*P. cent.*								
Lenoir	8	6	½	1½	3	27	0.4650	m	l	l	m	o	b	s, t, w
Do	50	10	10	1	....	22.6	.6731	m	l	l	m	o	b	s, t, w
Riparia Gloire	15	15	3	....	....	27.8	.6285	m	l	l	m	o	b	s, t, w
Rupestris St. George	12	8	1	16	2	28.1	.5520	m	l	l	m	o	b	s, t, w
Do	30	8	9	½	2	23.6	.6675	m	l	l	m	o	b	s, t, w
Muscat Noir Precoce:														
Aramon × Rupestris Ganzin, No. 2	....	4	10	....	....	23.9	.6187	m	l	l	m	o	b	s, t, w
Dog Ridge	25	2	....	4	....	22.8	.5625	m	l	l	m	o	b	s, t, w
Lenoir	60	8	13	1	4	21.5	.6010	m	l	l	m	o	b	s, t, w
Lukfata	....	2	5	....	....	24.1	.6337	m	l	l	m	o	b	s, t, w
Monticola × Riparia, No. 18804	....	....	4	....	....	25	.5625	m	l	l	m	o	b	s, t, w
Rupestris St. George	25	8	12	....	½	23.3	.5587	m	l	l	m	o	b	s, t, w
Rupestris × Berlandieri, No. 219A	....	3	3	....	....	26.3	.5437	m	l	l	m	o	b	s, t, w
Solonis × Othello	....	....	6	....	....	26	.5100	m	l	l	m	o	b	s, t, w
Taylor Narbonne	40	8	12	....	....	23.5	.5850	m	l	l	m	o	b	s, t, w
Muscat Rose:														
Dog Ridge	10	3	6	5	2	27.3	.6837	m	cy	c	s	r	r	s, t, w
Lenoir	7	0	3	½	....	27.9	.6400	m	cy	c	s	r	r	s, t, w
Riparia Gloire	2	2	2	5	....	29.7	.5156	m	cy	c	s	r	r	s, t, w
Rupestris St. George	15	1	4	8	2	28.7	.5025	m	cy	c	s	r	r	s, t, w
Muscat Rouge de Madre:														
Lenoir	....	....	....	....	....	....	....	m	cy	c	s	r	r	s, t, w
Riparia Gloire	....	....	½	2	2	29	.9325	m	cy	c	s	r	r	s, t, w
Rupestris St. George	....	2	....	6	6	28.6	.7500	m	cy	c	s	r	r	s, t, w
Muscat Talabot:														
Own roots	5	....	....	....	....	26	.3525	s	cy	l	s	r	r	s, t, w
Lenoir	10	....	¼	....	19	22.9	.5494	s	cy	l	s	r	r	s, t, w
Rupestris St. George	....	....	2	....	9	22.5	.6600	s	cy	l	s	r	r	s, t, w
Napoleon:														
Own roots	....	....	2	2	....	23.5	.6637	m	r	l	l	ob	w	s, t, w

Nasa Valentiana:													
Own roots	1	....	....	....	....	22	.4575	m	t	m	l	r	w	s, t, w
Rupestris St. George	5	10	....	3	2	24.6	.4706	m	t	m	l	r	w	s, t, w
Nebbiolo:														
Own roots	5	½	3½	3½	4	22.7	.7202	m	cy	c	m	r	b	w
Dog Ridge	40	15	8	....	....	24.4	.6133	m	cy	c	m	r	b	w
Lenoir	35	8	12	2	34	22.8	.7050	m	cy	c	m	r	b	w
Rupestris St. George	5	4	....	....	6½	25.3	.5400	m	cy	c	m	r	b	w
Nebbiolo Bourgu:														
Dog Ridge	10	1½	8	½	....	24.3	1.0012	m	t	c	m-l	r	b	w
Lenoir	20	....	....	....	1½	23.5	.9632	m	t	c	m-l	r	b	w
Rupestris St. George	5	5	....	....	9	23.8	.8666	m	t	c	m-l	r	b	w
Taylor Narbonne	5	2	....	....	....	25	.8587	m	t	c	m-l	r	b	w
Nebbiolo Fino:														
Dog Ridge	12	½	2½	....	....	23.7	1.0125	m	t	c	m-l	r	b	w
Lenoir	15	2	....	....	....	23.9	.7987	m	t	c	m-l	r	b	w
Rupestris St. George	10	1	6	....	4	24.3	.9262	m	t	c	m-l	r	b	w
Taylor Narbonne	....	....	....	....	....	....	....	m	t	c	m-l	r	b	w
Negrara di Gattinara:														
Own roots	2	⅓	2	....	....	26.3	.5550	m	lt	c	m-l	r	b	w
Negro Amaro:														
Own roots	8	8	½	19	1	27.5	.9950	m	t	c	s	r	b	w
Neiretta di Costilla:														
Own roots	3	....	2	3	....	23.8	.5450	m	t	m	m	r	b	w
Ocru di Boe:														
Own roots	1	....	2	15	7	25.5	.7313	s	cy	c	m	ob	b	w
Ohanez:														
Lenoir	....	....	....	....	....	....	....	l	t	m	l	ob	w	s, t, st
Olivette Blanche:														
Adobe Giant	....	....	....	32	....	17	.8475	l	t	m	l	ob	w	s, t
Lenoir	12	4	8	....	4	19.7	.9000	l	t	m	l	ob	w	s, t
Riparia à Grandes Feuilles	....	3	....	21	....	20.1	.7125	l	t	m	l	ob	w	s, t
Riparia × Rupestris, No. 101	3	....	....	....	....	23.6	.5325	l	t	m	l	ob	w	s, t
Olivette Chaptal:														
Lenoir	8	....	4	....	....	22.1	.6825	l	t	m	l	ob	w	s, t
Solonis Robusta	....	....	....	....	....	19	.9825	l	t	m	l	ob	w	s, t
Olivette Noir:														
Lenoir	8	2	6½	....	....	21	.5775	l	t	m	l	ob	b	s, t
Mourvedre × Rupestris, No. 1202	....	....	15	....	....	24	.4050	l	t	m	l	ob	b	s, t
Riparia × Rupestris, No. 3309	....	3	....	....	....	26.2	.8100	l	t	m	l	ob	b	s, t
Solonis × Othello, No. 1613	....	....	14	....	....	24	.5250	l	t	m	l	ob	b	s, t
Olivette Rose:														
Lenoir	20	....	5½	....	3	20	.7925	l	t	m	l	ob	r	s, t
Opiman:														
Lenoir	....	....	....	....	....	....	....	l	t	l	l	ob	w	s, t
Orleans:														
Own roots	3	3	....	4	....	21.5	.7925	s	cy	c	s	r	w	w
Pagadebito:														
Own roots	3	10	6	10	....	22	.6112	m	cy	m	m	r	b	w, s, t
Dog Ridge	40	2	10	1	4	23	8957	m	cy	m	m	r	b	w, s, t

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Pagadebito—Continued.						*P. cent*								
Lenoir	40⅘	3	7	10	38	23.6	0.7530	m	cy	m	m	r	b	w, s, t
Rupestris St. George	35	......	11	......	28	22.6	.8035	m	cy	m	m	r	b	w, s, t
Taylor Narbonne	15	4	5	2	1	23.4	.6945	m	cy	m	m	r	b	w, s, t
Palarusa:														
Own roots	......	8	20	30	......	18.6	.8325	l	cy-t	c	m	ob	w	s, t
Panariti:														
Adobe Giant	3	......	......	......	......	32	.7735	m-l	cy	c	vs	r	b	r, w, s
Aramon × Rupestris Ganzin, No. 1	10	......	10	......	......	32.8	.7050	m-l	cy	c	vs	r	b	r, w, s
Dog Ridge	3	......	4	......	......	33	.6562	m-l	cy	c	vs	r	b	r, w, s
Herbemont	......	......	......	......	......	......	......	m-l	cy	c	vs	r	b	r, w, s
Lenoir	......	......	4	......	......	29	.5700	m-l	cy	c	vs	r	b	r, w, s
Mourvedre × Rupestris, No. 1202	2	......	3	......	......	29.8	.6562	m-l	cy	c	vs	r	b	r, w, s
Riparia Gloire	2	......	3	......	......	28.1	.7387	m-l	cy	c	vs	r	b	r, w, s
Riparia × Rupestris, No. 101	......	......	......	......	......	......	......	m-l	cy	c	vs	r	b	r, w, s
Riparia × Rupestris, No. 3309	3	......	5	......	......	34.8	.6375	m-l	cy	c	vs	r	b	r, w, s
Rupestris Martin	......	......	......	......	......	......	......	m-l	cy	c	vs	r	b	r, w, s
Rupestris St. George	2	......	5	......	......	34.5	.6337	m-l	cy	c	vs	r	b	r, w, s
Salt Creek	......	......	3	......	......	29	.6000	m-l	cy	c	vs	r	b	r, w, s
Solonis × Riparia, No. 1616	3	......	5	......	......	33.5	.6070	m-l	cy	c	vs	r	b	r, w, s
Taylor Narbonne	......	......	2	......	......	31	.6900	m-l	cy	c	vs	r	b	r, w, s
Parc de Versailles:														
Adobe Giant	10	2	3	27	6	21.5	.5225	m	t	m	l	ob	w	s, t
Aramon × Rupestris Ganzin, No. 1	2	3	2	3	18	21.5	.5353	m	t	m	l	ob	w	s, t
Dog Ridge	5	4	2½	18½	13	19.3	.7450	m	t	m	l	ob	w	s, t
Lenoir	½	3	......	5	3	21.8	.5362	m	t	m	l	ob	w	s, t
Mourvedre × Rupestris, No. 1202	1	2	......	5	2	21.9	.5431	m	t	m	l	ob	w	s, t
Ponroy	......	......	......	......	......	20	.6150	m	t	m	l	ob	w	s, t
Riparia Gloire	6	1	4	41	20	22.2	.4875	m	t	m	l	ob	w	s, t
Riparia × Rupestris, No. 101	......	......	......	......	......	......	......	m	t	m	l	ob	w	s, t
Riparia × Rupestris, No. 3309	1	4	2	12	9	22.1	.5460	m	t	m	l	ob	w	s, t

Rupestris Metallica	....	....	....	6	....	23	.5400	m	t	m	l	ob	w	s, t
Rupestris St. George	10	1½	1½	15	8	20.3	.5055	m	t	m	l	ob	w	s, t
Solonis × Riparia, No. 1616	10	2	....	7	4	22.9	.5306	m	t	m	l	ob	w	s, t
Taylor Narbonne	5	1½	3	21	8	22.6	.5220	m	t	m	l	ob	w	s, t
Pedro Ximines:														
Own roots	20	22	10	21	11	23.3	.5153	m	t	l	m	ob	w	w
Adobe Giant	15	20	15	3	2	22.1	.5845	m	t	l	m	ob	w	w
Aramon × Rupestris Ganzin, No. 1	30	40	3	....	12	23.7	.4950	m	t	l	m	ob	w	w
Dog Ridge	35	50	12	2	15	22.2	.5290	m	t	l	m	ob	w	w
Herbemont	10	4	....	....	....	23.3	.5350	m	t	l	m	ob	w	w
Lenoir	40	30	2	2	1	21.9	.5130	m	t	l	m	ob	w	w
Mourvedre × Rupestris, No. 1202	40	50	8	20	28	22.5	.5355	m	t	l	m	ob	w	w
Riparia Gloire	20	50	2	28	20	21	.5430	m	t	l	m	ob	w	w
Riparia × Rupestris, No. 101	30	75	5	39	29	22	.4645	m	t	l	m	ob	w	w
Riparia × Rupestris, No. 3309	50	60	10	43	17	22.3	.6694	m	t	l	m	ob	w	w
Rupestris Martin	10	4	6	....	1	22.4	.5137	m	t	l	m	ob	w	w
Rupestris St. George	45	40	5	18	10	22.1	.4650	m	t	l	m	ob	w	w
Salt Creek	25	10	¼	3	2	21.4	.4890	m	t	l	m	ob	w	w
Solonis × Riparia, No. 1616	25	60	2	15	23	23	.5695	m	t	l	m	ob	w	w
Taylor Narbonne	30	40	20	25	18	21.4	.4605	m	t	l	m	ob	w	w
Perle Blanche:														
Lenoir	20	3	5	....	3	23.2	.7806	m	t, cy	m	m	ob	w	w
Rupestris St. George	20	3	1½	....	8	19.7	.8350	m	t, cy	m	m	ob	w	w
Lenoir	4	....	....	....	....	22	.3975	m	t, cy	m	m	ob	w	w
Perruno:														
Own roots	2	....	1	½	4	24	.4275	m	t, cy	l	l	ob	w	s, t
Persian, No. 21:														
Own roots	....	....	....	2	....	28	.555	m	t	l	m	ob	w	s, t
Persian, No. 25:														
Own roots	....	....	....	3	....	24	.6075	m	t	l	m	ob	w	s, t
Persian, No. 26:														
Own roots	....	....	....	1	....	24	.7125	m	t	l	m	ob	w	s, t
Peru:														
Lenoir	....	....	6½	3	5	23.3	.6275	m	t	m	l	ob	b	s, t, w
Petit Syrah:														
Own roots	....	....	....	....	12	20	1.0500	m	t, cy	c	m	r	b	w
Adobe Giant	....	....	6	....	5	21	.7312	m	t, cy	c	m	r	b	w
(Aestivalis × Monticola) × (Riparia × Rupestris, No. 554–5)	....	....	19	25	21	20	.8125	m	t, cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	....	....	11	7½	29½	20.6	.9025	m	t, cy	c	m	r	b	w
Do	25	20	9	....	....	23.1	.8325	m	t, cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 2	....	....	4	4½	3	22	.8733	m	t, cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 9	....	....	....	1	3	23.5	.8250	m	t, cy	c	m	r	b	w
Australis	....	....	6	1½	9½	20.3	.7345	m	t, cy	c	m	r	b	w
Berlandieri, No. 1	....	....	3	3	21	21	.7550	m	t, cy	c	m	r	b	w
Berlandieri, No. 2	....	....	9	4	8	21.6	.7683	m	t, cy	c	m	r	b	w
Berlandieri Lafont, No. 9	....	....	8	4	30	23	.7900	m	t, cy	c	m	r	b	w
Berlandieri × Riparia, No. 34EM	....	....	....	....	....	....	....	m	t, cy	c	m	r	b	w
Berlandieri × Riparia, No. 157–11	....	....	4	3	10	22	.8825	m	t, cy	c	m	r	b	w
Berlandieri × Riparia, No. 420A	....	....	2	....	3	25	.8600	m	t, cy	c	m	r	b	w
Do	....	....	3	2	....	25.5	.9562	m	t, cy	c	m	r	b	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Petit Syrah—Continued.						*P. cent.*								
Bourisquou × Rupestris, No. 109-4			17	⅓	12	21	1.1850	m	t, cy	c	m	r	b	w
(Bourisquou × Rupestris, No. 601) × Calcicola, No. 13205			9	3⅓	18½	21.8	.7800	m	t, cy	c	m	r	b	w
Bourisquou × Rupestris, No. 3907			8	7	9	21.6	.8941	m	t, cy	c	m	r	b	w
Cabernet × Berlandieri, No. 333			8	6 7/10	10½	20.3	.8600	m	t, cy	c	m	r	b	w
Cabernet × Rupestris Ganzin, No. 33A			6	2	16	22	1.2833	m	t, cy	c	m	r	b	w
Captain				2		18	.6750	m	t, cy	c	m	r	b	w
Chasselas × Berlandieri, No. 41B			5	1 7/10	19	21.6	.8275	m	t, cy	c	m	r	b	w
Constantia			4	1	8	23	.7725	m	t, cy	c	m	r	b	w
Dog Ridge			24	5	35	20.6	.8150	m	t, cy	c	m	r	b	w
Do	50	10	11	8	6	20.2	.8670	m	t, cy	c	m	r	b	w
Herbemont	25	25	4		12	20.5	.8700	m	t, cy	c	m	r	b	w
Hotporup			14	2	11	21.3	.7975	m	t, cy	c	m	r	b	w
Joly			6	3	13	18.3	.7517	m	t, cy	c	m	r	b	w
Judge			1	1	5½	21.3	.7700	m	t, cy	c	m	r	b	w
Lenoir	30	18	40	8	6	23.1	.7365	m	t, cy	c	m	r	b	w
Monticola × Riparia, No. 554			3	2	20	21.6	.7917	m	t, cy	c	m	r	b	w
Monticola × Riparia, No. 18808				3	4	23.5	1.0087	m	t, cy	c	m	r	b	w
Monticola × Rupestris			8	3	12½	23.3	.7550	m	t, cy	c	m	r	b	w
Motley			5	3	5	21	.8225	m	t, cy	c	m	r	b	w
Mourvedre × Rupestris, No. 1202			8	6½	30	23.6	.8775	m	t, cy	c	m	r	b	w
Do			20		19	22.5	.8175	m	t, cy	c	m	r	b	w
Mourvedre × Rupestris, No. 1203					1½	23	.9750	m	t, cy	c	m	r	b	w
Pardes			1	2	22½	21.6	.7600	m	t, cy	c	m	r	b	w
Riparia du Colorado			4	2 3/10	15½	19.6	.7850	m	t, cy	c	m	r	b	w
Riparia × (Cordifolia × Rupestris), No. 106-8			7	5	28½	19.6	.6508	m	t, cy	c	m	r	b	w
Riparia × Rupestris, No. 101			20	5⅕	34	22.3	.8600	m	t, cy	c	m	r	b	w
Do	50	5	11		2	22	.8725	m	t, cy	c	m	r	b	w
Riparia × Rupestris, No. 101-14			11	4½	28½	19.3	.7617	m	t, cy	c	m	r	b	w
Do								m	t, cy	c	m	r	b	w
Riparia × Rupestris, No. 108-103			8		12½	21	.8512	m	t, cy	c	m	r	b	w
Riparia × Rupestris, No. 3306			34	2½	37½	20.7	.8325	m	t, cy	c	m	r	b	w

Do.			7	1	3	23.3	.9450	m	t, cy	c	m	r	b	w
Riparia × Rupestris, No. 3309			26	8	32	23	.6900	m	t, cy	c	m	r	b	w
Do.	60	6	9	3	4	22.2	.7853	m	t, cy	c	m	r	b	w
Rupestris des Caussettes			7	1	21½	21.3	.8617	m	t, cy	c	m	r	b	w
Rupestris Martin			16	5		19	.9332	m	t, cy	c	m	r	b	w
Do.	45	8	9	1	6	22.4	.9885	m	t, cy	c	m	r	b	w
Rupestris Metallica			5	3½	12½	21	.8020	m	t, cy	c	m	r	b	w
Do.			9			22	1.1025	m	t, cy	c	m	r	b	w
Rupestris Mission			8	4½	13½	20	.8825	m	t	l	m	ob	w	w
Do.			9	4	12½	20.5	.9000	m	t	l	m	ob	w	w
Rupestris St. George			16	4	28	22.3	.7650	m	t	l	m	ob	w	w
Do.	50	12	13	6	8	21.5	.8060	m	t	l	m	ob	w	w
Rupestris × Berlandieri, No. 219A			12	6	29	19	.9250	m	t	l	m	ob	w	w
Rupestris × Berlandieri, No. 301A			8	3½	28	17.8	1.0300	m	t	l	m	ob	w	w
Rupestris × Berlandieri, No. 301B			13		32½	20	.8125	m	t	l	m	ob	w	w
Rupestris × (Cordifolia × Rupestris), No. 202–5			10	3½	17	20.3	.7696	m	t	l	m	ob	w	w
Rupestris × Hybrid Azemar, No. 215			2	1$\frac{7}{10}$	1½	22.6	.8275	m	t	l	m	ob	w	w
Salt Creek			7	3½	13	21.6	.7425	m	t	l	m	ob	w	w
Do.	40	3	5	4	3	20.7	.8250	m	t	l	m	ob	w	w
Solonis Ordinaire			2	2	2	20	.7900	m	t	l	m	ob	w	w
Solonis Robusta			7	5	23½	22	.7300	m	t	l	m	ob	w	w
Do.			8			27	.8475	m	t	l	m	ob	w	w
Solonis × Othello			15	4	31½	19.9	.7200	m	t	l	m	ob	w	w
Solonis × Othello, No. 1613			4			23	.8625	m	t	l	m	ob	w	w
Solonis × Riparia, No. 1616			24	3	28	21.6	.7450	m	t	l	m	ob	w	w
Do.	60	15	9			24.1	.8325	m	t	l	m	ob	w	w
Taylor Narbonne			4	2	7	19.6	.8000	m	t	l	m	ob	w	w
Do.	50	8	18	5	8	23.4	.8301	m	t	l	m	ob	w	w
Petit Verdot:														
Own roots	3	4		1	2	24.7	.7700	m	cy	c	m	r	b	w
Dog Ridge	35	7	12	½		22.8	.8231	m	cy	c	m	r	b	w
Lenoir	40	10	10½	3	16	24.2	.7115	m	cy	c	m	r	b	w
Rupestris St. George	45	5	8	¼	18	23.7	.7325	m	cy	c	m	r	b	w
Taylor Narbonne	30	5	3		1	23.3	.6844	m	cy	c	m	r	b	w
Peverella:														
Own roots	2		8	17	18	26	.7819	m-l	cy	c	m	r	w	w
Dog Ridge	40		8	½		22.3	.9175	m-l	cy	c	m	r	w	w
Lenoir	50	10	12	3	3	22.1	.8715	m-l	cy	c	m	r	w	w
Rupestris St. George	50	10	14	¾	24	22.8	.8520	m-l	cy	c	m	r	w	w
Taylor Narbonne	40	8	3	½	2	25	.5130	m-l	cy	c	m	r	w	w
Picpoul:														
Own roots			8	11		22.5	.6862	s	cy	l	s	ob	w	w
Piment:														
Lenoir	15	8	12			18.1	.6200	v-l	l	l	l	ob	r	s, t, st
Pince Muscat:														
Own roots		2		2		21.5	.6937	m	l	c	m	ob	b	s, t
Pineau de Chardonnay:														
Own roots	4	8		10		25	.6137	s	cy	c	s	r	w	w
Aramon × Rupestris Ganzin, No. 1		4				24.3	.6150	s	cy	c	s	r	w	w
Dog Ridge	8	2	2		2	25.2	.7281	s	cy	c	s	r	w	w
Herbemont	2	4				24.9	.7912	s	cy	c	s	r	w	w
Lenoir	12	1	1		2	23.3	.7581	s	cy	c	s	r	w	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Pineau de Chardonnay—Continued.						*P. cent.*								
Mourvedre × Rupestris, No. 1202	....	5	....	....	....	28.3	0.7125	s	cy	c	s	r	w	w
Riparia × Rupestris, No. 101	4	....	....	....	....	27	.6600	s	cy	c	s	r	w	w
Riparia × Rupestris, No. 3309	4	1½	4	....	....	27.9	.8475	s	cy	c	s	r	w	w
Rupestris Martin	3	1	2	....	2½	25.6	.7744	s	cy	c	s	r	w	w
Rupestris St. George	7	....	2	....	....	27.5	.7527	s	cy	c	s	r	w	w
Salt Creek	8	....	1	....	3	25.3	.8128	s	cy	c	s	r	w	w
Solonis × Riparia, No. 1616	25	....	9½	....	....	21.5	.5512	s	cy	c	s	r	w	w
Taylor Narbonne	2	1	1	....	....	28.3	.6791	s	cy	c	s	r	w	w
Pineau de Ribeauvillers:														
Own roots	4	1½	2	18	....	23.1	.7031	s	cy	c	s	r	w	w
Dog Ridge	15	2	3	....	....	23.3	.6858	s	cy	c	s	r	w	w
Lenoir	15	5	7	....	....	21.7	.8375	s	cy	c	s	r	w	w
Rupestris St. George	20	10	....	....	....	23.5	.7200	s	cy	c	s	r	w	w
Pineau Noir Epernay:														
Own roots	3	1½	....	....	....	27.5	.5137	s	cy	c	s	r	b	w
Lenoir	10	....	....	....	4	25.1	.4837	s	cy	c	s	r	b	w
Rupestris St. George	15	3	4	....	....	26.1	.7175	s	cy	c	s	r	b	w
Pinot Blanc:														
Own roots	....	....	½	3	3	25.6	.7683	s	cy	c	s	r	w	w
Pinot St. George:														
Own roots	12	4	8	26	9	24.7	.6560	m	cy	m	m	ob	b	w
Dog Ridge	35	5	12	....	2	23.5	.6806	m	cy	m	m	ob	b	w
Lenoir	15	1	....	3	20	24.5	.6356	m	cy	m	m	ob	b	w
Rupestris St. George	10	2	3	⅓	8	24.7	.6210	m	cy	m	m	ob	b	w
Pinot Vert Doré:														
Own roots	2	....	1	3	....	27.7	.6450	s	t	c	s	ob	w	w
Pis de Chevre des Alps:														
Own roots	....	....	....	....	....	24	.5375	m-l	t	l	m	ob	r	w
Dog Ridge	25	8	⅓	3	....	21.3	.6618	m-l	t	l	m	ob	r	w
Lenoir	10	15	....	2	12	19.2	.7412	m-l	t	l	m	ob	r	w
Rupestris St. George	20	15	12	½	7	22.6	.7605	m-l	t	l	m	ob	r	w
Pis de Chevre Rouge:														
Lenoir	2	....	1½	....	....	25.1	.8062	m-l	t	l	m	ob	r	w

Pizzutella:														
Own roots	......	......	½	2	......	23	.3787	l	t	m	l	o	w	s, t, r
Adobe Giant	12	20	2	4	16	22.4	.4020	l	t	m	l	o	w	s, t, r
Aramon × Rupestris Ganzin, No. 1	8	12	4	4½	12	24.5	.4660	l	t	m	l	o	w	s, t, r
Dog Ridge	3	3	2	......	......	23.2	.4331	l	t	m	l	o	w	s, t, r
Herbemont	......	......	......	......	......	24.8	.3075	l	t	m	l	o	w	s, t, r
Lenoir	10	6	4	1	2	23	.3485	l	t	m	l	o	w	s, t, r
Mourvedre × Rupestris, No. 1202	6	10	5	12	3	23.6	.4005	l	t	m	l	o	w	s, t, r
Riparia Gloire	6	3	3	12	7	23.5	.4230	l	t	m	l	o	w	s, t, r
Riparia × Rupestris, No. 101	12	25	2	12	2	24.6	.4726	l	t	m	l	o	w	s, t, r
Riparia × Rupestris, No. 3309	10	10	3	8	1	22.3	.4300	l	t	m	l	o	w	s, t, r
Rupestris Martin	3	0	½	......	......	27.8	.3300	l	t	m	l	o	w	s, t, r
Rupestris St. George	15	10	4	5	8	24.9	.3336	l	t	m	l	o	w	s, t, r
Salt Creek	4	2	1	2	1	23.6	.4635	l	t	m	l	o	w	s, t, r
Solonis × Riparia, No. 1616	10	......	......	12	1	25.1	.5110	l	t	m	l	o	w	s, t, r
Taylor Narbonne	1	20	1	8	2	23.7	.2950	l	t	m	l	o	w	s, t, r
Poulsard:														
Own roots	5	......	½	1½	......	27	.6466	l	cy	c	l	o	b	s, t, w
Precoce de Courtiller:														
Lenoir	4	......	½	......	2	22.1	.8006	s	cy	l	m	r	w	s, t, w
Rupestris St. George	4	......	5	......	......	22.1	.8058	s	cy	l	m	r	w	s, t, w
Prune de Cazouls:														
Aramon × Rupestris Ganzin, No. 2	......	......	25	......	......	22	.8162	l	t	c	l	o	b	s, t, st
Australis	......	......	12	......	......	18	.8475	l	t	c	l	o	b	s, t, st
Berlandieri × Riparia, No. 420A	......	......	8	......	......	25.5	.6262	l	t	c	l	o	b	s, t, st
Lenoir	18	5	12	......	6	20.2	.7550	l	t	c	l	o	b	s, t, st
Monticola × Riparia, No. 18804	......	......	12	......	......	25	.4275	l	t	c	l	o	b	s, t, st
Monticola × Riparia, No. 18808	......	......	32	......	......	21	.8925	l	t	c	l	o	b	s, t, st
Monticola × Rupestris	......	......	30	......	......	22	.7650	l	t	c	l	o	b	s, t, st
Riparia × (Cordifolia × Rupestris, No. 106-8)	......	......	20	......	......	25	.6625	l	t	c	l	o	b	s, t, st
Riparia × Rupestris, No. 101-14	......	......	12	......	......	22	.7800	l	t	c	l	o	b	s, t, st
Riparia × Rupestris, No. 3306	......	......	24	......	......	22	.7875	l	t	c	l	o	b	s, t, st
Rupestris Martin	......	......	15	......	......	20	.7950	l	t	c	l	o	b	s, t, st
Purple Damascus:														
Own roots	......	......	½	2½	......	23	.6075	m-l	t, cy	m	l	ob	b	s, t
Adobe Giant	40	40	2	12	3	23.2	.5630	m-l	t, cy	m	l	ob	b	s, t
Aramon × Rupestris Ganzin, No. 1	30	30	3	35	23	23.1	.7515	m-l	t, cy	m	l	ob	b	s, t
Dog Ridge	13	45	4½	10	6	23	.7180	m-l	t, cy	m	l	ob	b	s, t
Lenoir	25	30	3	8	4	21.7	.6105	m-l	t, cy	m	l	ob	b	s, t
Mourvedre × Rupestris, No. 1202	20	50	10	20	2	22.1	.7065	m-l	t, cy	m	l	ob	b	s, t
Riparia Gloire	12	29	5	15	14	23.1	.6420	m-l	t, cy	m	l	ob	b	s, t
Riparia × Rupestris, No. 101	15	25	2	7	6	23.3	.5050	m-l	t, cy	m	l	ob	b	s, t
Riparia × Rupestris, No. 3309	15	40	3	36	22	23.1	.6795	m-l	t, cy	m	l	ob	b	s, t
Rupestris St. George	30	35	5	18	12	22.1	.5970	m-l	t, cy	m	l	ob	b	s, t
Solonis × Riparia, No. 1616	12	30	2	20	8	22.2	.5521	m-l	t, cy	m	l	ob	b	s, t
Taylor Narbonne	20	50	30	15	2	22.1	.5170	m-l	t, cy	m	l	ob	b	s, t
Quagliano:														
Own roots	10	10	......	30	7	23.5	.5606	m-l	cy	c	m	r	b	s, t, w
Dog Ridge	15	3	9	......	½	20.5	.6400	m-l	cy	c	m	r	b	s, t, w
Lenoir	60	17	13	6	33	20	.8085	m-l	cy	c	m	r	b	s, t, w
Rupestris St. George	40	5	13	1	17	22.7	.6285	m-l	cy	c	m	r	b	s, t, w
Taylor Narbonne	6	9	12	6	......	21.9	.6744	m-l	cy	c	m	r	b	s, t, w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Berry.			Cluster.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Razaki Zolo:						*P. cent.*								
Own roots	2	4	1	2		22.9	0.5400	m	cy	l	m	ob	r	s, t
Rupestris St. George	12					20.8	.5250	m	cy	l	m	ob	r	s, t
Riparia × Rupestris, No. 3306	12		13			20.9	.6262	m	cy	l	m	ob	r	s, t
Refosco:														
Own roots				2½		25	.8475	s	cy	c	m	r	b	w
Dog Ridge	30	10	6	6	4	28.7	.6840	s	cy	c	m	r	b	w
Lenoir	50	15	13½	8	28	23.2	.6995	s	cy	c	m	r	b	w
Rupestris St. George	40	15	10	3	32	24.1	.6690	s	cy	c	m	r	b	w
Taylor Narbonne	30	6	1½	1	3	24.5	.7005	s	cy	c	m	r	b	w
Ribier:														
Lenoir	10					22	.6750	s	cy	c	m	r	b	w
Rupestris St. George	10					21.5	.4800	s	cy	c	m	r	b	w
Robin Noir:														
Own roots	15	10	3	10		25.5	.7337	l	cy	m	m	ob	b	w
Rodites:														
Lenoir	25	3	12			21.1	.6641	v, l	t	l	l	ob	r	s, st, l
Rose d'Italie:														
Lenoir	5	8	½	3		23.2	.7250	m	t	l	m-l	ob	r	s, t, w
Riparia × Rupestris, No. 3309	15	7	4			26	.6100	m	t	l	m-l	ob	r	s, t, w
Rupestris St. George	10	1				26.2	.6750	m	t	l	m-l	ob	r	s, t, w
Solonis × Riparia, No. 1616	15	12	15	2		26.8	.6656	m	t	l	m-l	ob	r	s, t, w
Taylor Narbonne	5		1	½		23.6	.6850	m	t	l	m-l	ob	r	s, t, w
Rothgipfler:														
Own roots	20	3	20	8		25.1	.6687	m	t	c	m	o	w	w
Roussaou:														
Own roots	10	1		25	4	24.5	.7294	m	t	c	m	ob	w	w
Dog Ridge	15	10	9	2		21.8	.6712	m	t	c	m	ob	w	w
Lenoir	20	15	5	2½	36	22.1	.5900	m	t	c	m	ob	w	w
Riparia × Rupestris, No. 3306	40		12			24.9	.5625	m	t	c	m	ob	w	w
Riparia × Rupestris de Jaeger		2		3		23.6	.5437	m	t	c	m	ob	w	w
Rupestris St. George	25	8	11		23	24.4	.5212	m	t	c	m	ob	w	w

Solonis × Riparia, No. 1616	....	....	3	....	....	27	.5175	m	t	c	m	ob	w	w
Taylor Narbonne	20	....	....	....	....	23.2	.3750	m	t	c	m	ob	w	w
Royal Ascot:														
Own roots	20	6	....	23	....	20.7	.6150	s	r	c	l	ro	b	s, t, st
Saint Laurent:														
Own roots	1½	3	1½	3	....	26.3	.4625	m	cy	c	m-l	o	w	s, t
Adobe Giant	8	14	8	3	....	25.4	.4218	m	cy	c	m-l	o	w	s, t
Aramon × Rupestris Ganzin, No. 1	8	10	10	12	2	24	.4130	m	cy	c	m-l	o	w	s, t
Dog Ridge	10	16	2	5	2	25.6	.4170	m	cy	c	m-l	o	w	s, t
Herbemont	12	1	3	....	1	25	.4512	m	cy	c	m-l	o	w	s, t
Lenoir	2	6	....	....	....	25.3	.4462	m	cy	c	m-l	o	w	s, t
Mourvedre × Rupestris, No. 1202	12	12	6	12	8	24.1	.4555	m	cy	c	m-l	o	w	s, t
Riparia Gloire	5	4	4	2½	11	26.2	.4939	m	cy	c	m-l	o	w	s, t
Riparia × Rupestris, No. 101	8	12	2	3	2	26.5	.4710	m	cy	c	m-l	o	w	s, t
Riparia × Rupestris, No. 3309	....	15	3	1	2	24.1	.4287	m	cy	c	m-l	o	w	s, t
Rupestris Martin	10	½	4	....	....	26.2	.4125	m	cy	c	m-l	o	w	s, t
Rupestris St. George	5	10	12	10	.8	25.8	.4545	m	cy	c	m-l	o	w	s, t
Salt Creek	10	5	2	1	....	27.2	.4594	m	cy	c	m-l	o	w	s, t
Solonis × Riparia, No. 1616	8	....	....	....	....	28	.3975	m	cy	c	m-l	o	w	s, t
Taylor Narbonne	12	½	....	....	....	29.1	.4360	m	cy	c	m-l	o	w	s, t
Saint Macaire:														
Own roots	12	4	4	11	....	22.2	.9056	m-l	r	c	m	ob	b	w
Aramon × Rupestris Ganzin, No. 1	....	....	2½	....	....	26	.8175	m-l	r	c	m	ob	b	w
Dog Ridge	20	5	11	2	2	23.6	.8630	m-l	r	c	m	ob	b	w
Lenoir	40	15	13	9	20	22	1.0275	m-l	r	c	m	ob	b	w
Mourvedre × Rupestris, No. 1202	....	....	....	....	6	24	.8250	m-l	r	c	m	ob	b	w
Rupestris St. George	40	10	11	3	20	24.8	.9400	m-l	r	c	m	ob	b	w
Solonis × Riparia, No. 1616	....	....	....	....	4	25	.7950	m-l	r	c	m	ob	b	w
Taylor Narbonne	50	10	9	½	3	22.4	1.1085	m-l	r	c	m	ob	b	w
San Gioveto:														
Dog Ridge	½	....	....	....	....	24	1.0500	s	t, cy	l	s	r	b	w
Lenoir	½	....	....	....	....	24	.8775	s	t, cy	l	s	r	b	w
Rupestris St. George	½	....	3	....	....	26.2	.9112	s	t, cy	l	s	r	b	w
Taylor Narbonne	....	....	....	....	....	....	....	s	t, cy	l	s	r	b	w
Satin Blanc:														
Dog Ridge	6	....	....	....	....	24	.3975	m	cy	c	m	r	w	s, t
Lenoir	3	....	....	....	2	24.7	.4700	m	cy	c	m	r	w	s, t
Rupestris St. George	8	....	....	....	6	23.3	.4950	m	cy	c	m	r	w	s, t
Sauvignon Blanc:														
Own roots	....	....	....	⅓	....	25	.5475	m	cy	c	m	r	w	s, t
Dog Ridge	12	10	12	6	3	21	.8190	m	cy	c	m	r	w	s, t
Lenoir	25	12	5½	3	36	20.6	.8635	m	cy	c	m	r	w	s, t
Rupestris St. George	5	....	14	....	7	22.3	.9100	m	cy	c	m	r	w	s, t
Sauvignon Vert:														
Own roots	10	10	15	24	23	25.1	.4785	s	t, cy	l	m	r	w	w
Aramon × Rupestris Ganzin, No. 1	60	40	19	10	15	23.4	.6495	s	t, cy	l	m	r	w	w
Aramon × Rupestris Ganzin, No. 2	....	....	2	....	....	27	.5775	s	t, cy	l	m	r	w	w
Berlandieri × Riparia, No. 420A	....	....	10	6	7	25.3	.6300	s	t, cy	l	m	r	w	w
Constantia	....	....	1½	....	8	27.5	.6225	s	t, cy	l	m	r	w	w
Dog Ridge	55	12	16	20	21	22.7	.5975	s	t, cy	l	m	r	w	w
Herbemont	60	15	12	4	12	22.9	.5970	s	t, cy	l	m	r	w	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Sauvignon Vert—Continued.						*P. cent.*								
Lenoir	45	15	9	5	5	24.4	0.5970	s	t, cy		m	r	w	w
Monticola × Riparia, No. 18808	½	1	3	....	....	24.3	.6530	s	t, cy	l	m	r	w	w
Mourvedre × Rupestris, No. 1202	50	12	13	2	18	22.8	.6825	s	t, cy	l	m	r	w	w
Riparia × Rupestris, No. 101	50	12	13	6	18	22.4	.6915	s	t, cy	l	m	r	w	w
Riparia × Rupestris, No. 101-14	....	....	2	....	2	24.5	.5137	s	t, cy	l	m	r	w	w
Riparia × Rupestris, No. 3306	....	....	10	....	7	24.5	.6937	s	t, cy	l	m	r	w	w
Riparia × Rupestris, No. 3309	60	10	10	8	10	25.6	.6013	s	t, cy	l	m	r	w	w
Rupestris Martin	60	12	8	....	23	23.1	.5130	s	t, cy	l	m	r	w	w
Rupestris St. George	55	8	5	2	4	25.1	.6325	s	t, cy	l	m	r	w	w
Salt Creek	50	12	9	3	7	24.1	.5805	s	t, cy	l	m	r	w	w
Solonis Robusta	....	....	2	....	2	27	.6262	s	t, cy	l	m	r	w	w
Solonis × Othello, No. 1613	....	....	5½	2	4	25	.6466	s	t, cy	l	m	r	w	w
Solonis × Riparia, No. 1616	55	45	13	15	4	24.9	.5390	s	t, cy	l	m	r	w	w
Taylor Narbonne	60	10	20	2	12	24.4	.6185	s	t, cy	l	m	r	w	w
Schiradzouli Blanc:														
Lenoir	2	2	9	....	....	23	.4625	m	t	c	m	o	w	s, t, st
Schiradzouli Violet:														
Lenoir	2	....	5	....	....	21	.6150	m	t	c	m	o	r	s, t, st
Semillon:														
Own roots	8	3	2	15	4	24.6	.5670	m	cy	l	m	r	w	w
Aramon × Rupestris Ganzin, No. 1	30	10	12	½	....	24.2	.7556	m	cy	l	m	r	w	w
Berlandieri × Riparia, No. 420A	....	....	....	½	4	25.5	.7680	m	cy	l	m	r	w	w
Dog Ridge	30	3	13	8	10	24.5	.7635	m	cy	l	m	r	w	w
Herbemont	40	15	15	5	12	22.3	.7200	m	cy	l	m	r	w	w
Lenoir	20	5	5	3	....	21.2	.7275	m	cy	l	m	r	w	w
Monticola × Riparia, No. 18808	....	....	....	....	4	27	.5400	m	cy	l	m	r	w	w
Mourvedre × Rupestris, No. 1202	20	2	....	....	....	24	.5850	m	cy	l	m	r	w	w
Riparia × Rupestris, No. 101	20	8	9	2	5	22.9	.6360	m	cy	l	m	r	w	w
Riparia × Rupestris, No. 3306	....	....	3	3	4	25.6	.8075	m	cy	l	m	r	w	w
Riparia × Rupestris, No. 3309	35	5	....	....	3	21.8	.6921	m	cy	l	m	r	w	w
Rupestris Martin	20	2	2	....	4½	25	.5819	m	cy	l	m	r	w	w
Rupestris St. George	20	8	7	½	3	22.6	.6015	m	cy	l	m	r	w	w

Salt Creek	25	5	6	1	4	25.2	.7620	m	cy	l	m	r	w	w
Solonis × Othello, No. 1613					3	25	.9675	m	cy	l	m	r	w	w
Solonis × Riparia, No. 1616	25	5			2	27.2	.5275	m	cy	l	m	r	w	w
Taylor Narbonne	25	4	4	½	2	25.4	.6900	m	cy	l	m	r	w	w
Semillon Blanc:														
Own roots	3	4		4	8	23.8	.6206	m	cy	l	m	r	w	w
Serine:														
Own roots	2		1	3	2	25.5	.7312	s	cy	c	s	r	b	w
Dog Ridge	15	5	9		3	26.9	.8460	s	cy	c	s	r	b	w
Lenoir	25	8	7	6	14	25	.6662	s	cy	c	s	r	b	w
Rupestris St. George	35	15	19	2	10	25.9	.8145	s	cy	c	s	r	b	w
Taylor Narbonne		10		3		26	.7387	s	cy	c	s	r	b	w
Servan Rose:														
Lenoir	8		6		6	20	.7150	m	r	l	l	ob	r	s, t, st
Sicilien:														
Own roots		1		3		20.5	.7162	l	l	l	l	ob	w	s, t, st
Aramon × Rupestris Ganzin, No. 1	16					17.4	.6937	l	l	l	l	ob	w	s, t, st
Lenoir	4		5½		½	24.3	.4875	l	l	l	l	ob	w	s, t, st
Slankamenka:														
Own roots	2	1	2	10		25	.7181	l	l	l	l	ob	w	s, t, st
Souvenir du Congrès:														
Dog Ridge	11		1			22.6	.5550	s	cy	l	s	r	w	w, t
Lenoir	2					23	.5325	s	cy	l	s	r	w	w, t
Rupestris St. George	3		½			22	.6825	s	cy	l	s	r	w	w, t
Sparbonna:														
Own roots	6	3	1	15		21.1	.7237	m	r	l	m	r	b	w
Sucre de Marseille:														
Dog Ridge	20	2	2	10	3	24.7	.5830	s	r	l	m	r	w	w
Lenoir	20	5	9		5	24	.6137	s	r	l	m	r	w	w
Rupestris St. George	10	3	1½		8	24.8	.6075	s	r	l	m	r	w	w
Taylor Narbonne	5					26.8	.4875	s	r	l	m	r	w	w
Sufetha:														
Own roots	25					15.9	1.1475	s	cy	c	m	ob	w	st, s, t
Sultana:														
Own roots			½		4	23.5	.8887	l	l	l	m	r	w	s, t, r, w
Sultanina:														
Own roots		⅓			4	25.5	.6187	vl	l	l	m	ob	w	s, t, r, w
Do	20	10				24	.5425	vl	l	l	m	ob	w	s, t, r, w
Aramon × Rupestris Ganzin, No. 1	12	12				25.5	.6112	vl	l	l	m	ob	w	s, t, r, w
Do			4	46		25.5	.5850	vl	l	l	m	ob	w	s, t, r, w
Aramon × Rupestris Ganzin, No. 2				4		24	.4500	vl	l	l	m	ob	w	s, t, r, w
Australis			9	13		25	.5100	vl	l	l	m	ob	w	s, t, r, w
Dog Ridge	25					23	.4950	vl	l	l	m	ob	w	s, t, r, w
Hotporup				6		22	.5025	vl	l	l	m	ob	w	s, t, r, w
Lenoir	8		4			23.5	.6070	vl	l	l	m	ob	w	s, t, r, w
Monticola × Riparia, No. 554		3	2	9		24.1	.5500	vl	l	l	m	ob	w	s, t, r, w
Monticola × Riparia, No. 18804						23	.5775	vl	l	l	m	ob	w	s, t, r, w
Monticola × Riparia, No. 18808			8			23	.5325	vl	l	l	m	ob	w	s, t, r, w
Monticola × Riparia, No. 18815		5				25.1	.5100	vl	l	l	m	ob	w	s, t, r, w
Monticola × Rupestris				4		23	.6850	vl	l	l	m	ob	w	s, t, r, w
Ponroy						23	.6150	vl	l	l	m	ob	w	s, t, r, w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 00 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Sultanina—Continued.						*P. cent.*								
Ramsey		2	8			24.7	0.5470	vl	l	l	m	ob	w	s, t, r, w
Riparia × (Cordifolia Rupestris, No. 106–8)				15		25	.5475	vl	l	l	m	ob	w	s, t, r, w
Riparia × Rupestris, No. 101	15	2				26.6	.5850	vl	l	l	m	ob	w	s, t, r, w
Riparia × Rupestris, No. 101–14				5		25.5	.5062	vl	l	l	m	ob	w	s, t, r, w
Riparia × Rupestris, No. 3306				4		23	.4950	vl	l	l	m	ob	w	s, t, r, w
Riparia × Rupestris, No. 3309	20	3	5			25.2	.6025	vl	l	l	m	ob	w	s, t, r, w
Riparia × Rupestris de Jaeger, No. 201				16		22	.9250	vl	l	l	m	ob	w	s, t, r, w
Rupestris des Caussettes				7		20	.5625	vl	l	l	m	ob	w	s, t, r, w
Rupestris Martin				3		25	1.2175	vl	l	l	m	ob	w	s, t, r, w
Rupestris Mission				10		26	.5025	vl	l	l	m	ob	w	s, t, r, w
Rupestris × Berlandieri, No. 219A			6	14		24.8	.5645	vl	l	l	m	ob	w	s, t, r, w
Salt Creek			10			25	.5400	vl	l	l	m	ob	w	s, t, r, w
Solonis Robusta				5		29	.5775	vl	l	l	m	ob	w	s, t, r, w
Solonis × Othello, No. 1613				11		24	.5625	vl	l	l	m	ob	w	s, t, r, w
Solonis × Riparia, No. 1616	25	20				27.8	.5925	vl	l	l	m	ob	w	s, t, r, w
Vermorel			3			23	.6000	vl	l	l	m	ob	w	s, t, r, w
Viala			5	20		25	.5041	vl	l	l	m	ob	w	s, t, r, w
Sultanina Rosea:														
Lenoir	½	2				25.2	.6675	l	l	l to c	m	ob	r	s, st, t, l
Sylvaner:														
Own roots	3	2	4	18		25.5	.5868	s	cy	c	s	r	w	w
Aramon × Rupestris Ganzin, No. 1	20	10	11	3		24.4	.6450	s	cy	c	s	r	w	w
Dog Ridge	20	6	9	4	6	25	.7365	s	cy	c	s	r	w	w
Herbemont	20	12	6	2		25.6	.7312	s	cy	c	s	r	w	w
Lenoir	10	3	10	1		24.7	.6994	s	cy	c	s	r	w	w
Riparia × Rupestris, No. 101	25	9	4	2	7	25.2	.7475	s	cy	c	s	r	w	w
Riparia × Rupestris, No. 3309	20	10	6	1		26.5	.7069	s	cy	c	s	r	w	w
Rupestris Martin	15	2	8		6	26.5	.7106	s	cy	c	s	r	w	w
Rupestris St. George	24	2	7	1	2	27.7	.7500	s	cy	c	s	r	w	w
Syrian:														
Own roots		1½	10	5		23	.6650	l	l	l	l	ob	w	s, st, t

Tadone:														
Dog Ridge	30	5	....	....	....	21.1	.7725	l	t	c	m	r	b	w
Lenoir	55	7	4	1½	13	21.9	.9660	l	t	c	m	r	b	w
Rupestris St. George	15	4	6½	1	12	23.9	.9090	l	t	c	m	r	b	w
Taylor Narbonne	6	5	8½	....	....	22.9	.8550	l	t	c	m	r	b	w
Tannat:														
Own roots	8	1	5	30	4	24.6	.5651	m	cy	c	m	r	b	w
Dog Ridge	50	8	18	....	5	22.8	.9187	m	cy	c	m	r	b	w
Lenoir	40	12	7½	7	23	25	1.0413	m	cy	c	m	r	b	w
Rupestris St. George	40	15	....	4	24	25.5	.7400	m	cy	c	m	r	b	w
Taylor Narbonne	10	3	....	2½	....	27.6	1.0325	m	cy	c	m	r	b	w
Teneron:														
Own roots	8	½	4	½	4	24.6	.6165	l	t	c	l	r	w	s, st, t
Lenoir	6	3	6	....	4	22.5	.7530	l	t	c	l	r	w	s, st, t
Riparia × Rupestris, No. 3306	....	....	23	12	36	22.3	.9500	l	t	c	l	r	w	s, st, t
Terret Monstre:														
Adobe Giant	4	5	....	....	....	23.7	.7550	l	t	m	l	ob	w	s, st, t
Canada	7	6	....	....	....	22.6	.7575	l	t	m	l	ob	w	s, st, t
Lenoir	8	8	15	....	6	21.5	.6862	l	t	m	l	ob	w	s, st, t
Riparia × Rupestris, No. 101	....	8	5	27	....	22.3	.7300	l	t	m	l	ob	w	s, st, t
Rupestris des Caussettes	....	3	10	....	....	22.7	.7700	l	t	m	l	ob	w	s, st, t
Solonis × Riparia, No. 1616	....	7	8	....	....	23.7	.6725	l	t	m	l	ob	w	s, st, t
Valencia	....	....	4	....	....	25	.6525	l	t	m	l	ob	w	s, st, t
Tinta Amarella:														
Own roots	....	12	8	....	12	23.4	.7257	m-l	t	c	m	r	b	w
Dog Ridge	30	15	15	1	....	23.2	.8169	m-l	t	c	m	r	b	w
Lenoir	40	5	15	5	32	22.6	.7560	m-l	t	c	m	r	b	w
Rupestris St. George	50	10	15	3	11	23.4	.7160	m-l	t	c	m	r	b	w
Taylor Narbonne	60	10	9	....	4	22.1	.7125	m-l	t	c	m	r	b	w
Tinta Cao:														
Own roots	10	8	5	10	....	24.5	.5619	m	cy	m	s	r	b	w
Dog Ridge	25	3	8½	1	....	22.4	.7712	m	cy	m	s	r	b	w
Lenoir	30	15	13	3	18	23.1	.7250	m	cy	m	s	r	b	w
Rupestris St. George	40	3	10	1½	5	23.9	.7680	m	cy	m	s	r	b	w
Taylor Narbonne	20	5	....	....	4	25	.5580	m	cy	m	s	r	b	w
Tinta de Madeire:														
Own roots	....	3	¼	2	1	25.3	.6281	m	cy	c	s	ob	b	w
Dog Ridge	5	1	11	....	....	24.6	.7700	m	cy	c	s	ob	b	w
Lenoir	15	3	6	2	3	27.4	.6390	m	cy	c	s	ob	b	w
Rupestris St. George	30	1½	5	....	20	26.9	.6750	m	cy	c	s	ob	b	w
Taylor Narbonne	10	....	....	....	....	28.2	.4350	m	cy	c	s	ob	b	w
Torok Goher Noir:														
Own roots	6	½	....	18	....	22.5	.4675	m-l	cy	m	m-l	ob	b	w
Traminer:														
Own roots	....	....	....	2½	1	23	.8175	m	t	m	m-l	r	w	w, t
Aramon × Rupestris Ganzin, No. 1	40	12	10	....	4	25.5	.6412	m	t	m	m-l	r	w	w, t
Dog Ridge	40	15	6½	10	18	22	.7665	m	t	m	m-l	r	w	w, t
Herbemont	25	10	4	....	2	24.2	.4806	m	t	m	m-l	r	w	w, t
Lenoir	40	20	9½	5	4	22.7	.7365	m	t	m	m-l	r	w	w, t
Mourvedre × Rupestris, No. 1202	50	4	....	....	....	22.6	.6862	m	t	m	m-l	r	w	w, t
Riparia × Rupestris, No. 101	40	6	2	....	2	24.8	.6862	m	t	m	m-l	r	w	w, t

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Traminer—Continued.						*P. cent.*								
Riparia × Rupestris, No. 3309	50	4	13	....	7	26	0.7631	m	t	m	m-l	r	w	w, t
Rupestris Martin	30	3	3	....	13	22.4	.6712	m	t	m	m-l	r	w	w, t
Rupestris St. George	50	15	19	....	15	23.2	.7612	m	t	m	m-l	r	w	w, t
Salt Creek	50	8	5	....	....	23.1	.6750	m	t	m	m-l	r	w	w, t
Solonis × Riparia, No. 1616	50	15	3	....	....	24.5	.7400	m	t	m	m-l	r	w	w, t
Taylor Narbonne	55	....	....	....	5	25	.8312	m	t	m	m-l	r	w	w, t
Trentham:														
Own roots	3	....	....	4	....	27	.5025	m	t	m	l	ob	b	s, st, w
Lenoir	15	....	6	....	4	24.6	.5212	m	t	m	l	ob	b	s, st, w
Rupestris St. George	20	2	....	....	15	24.8	.5655	m	t	m	l	ob	b	s, st, w
Trifere du Japon:														
Lenoir	10	1	8	....	....	17.6	.5958	l	r	c	l	ob	b	s, st, t
Triomphe:														
Lenoir	10	8	15	....	3½	19.1	.9637	l	r	c	l	ob	b	s, st, t
Trivoti:														
Own roots	4	5	6	....	5	21.1	.8175	l	cy	c	l	ob	b	w
Trojka:														
Own roots	1	2	20	18	18	21.1	.7905	l	t	m	l	ob	w	t, st, s
Trousseau:														
Own roots	....	2	2	4	12	28.1	.6532	s	cy	c	s	r	b	w
Dog Ridge	10	1	2	1	....	26.7	.6375	s	cy	c	s	r	b	w
Lenoir	20	5	5	....	3	25	.7425	s	cy	c	s	r	b	w
Rupestris St. George	20	4	5	....	1	25.3	.7376	s	cy	c	s	r	b	w
Taylor Narbonne	15	....	....	....	....	26	.5550	s	cy	c	s	r	b	w
Ulliade Blanche d'Ambre:														
Own roots	....	....	6	....	....	21.5	.6112	s	cy	c	s	r	w	w
Valandova:														
Dog Ridge	10	....	....	....	....	22.2	.3825	m	r	m	l	ob	r	s, st, t
Lenoir	5	2	....	....	....	21.8	.5250	m	r	m	l	ob	r	s, st, t

Valdepenas:														
Own roots	2	5	2	10	....	23.8	.7294	m	cy	m	m	ob	b	w
Aramon × Rupestris Ganzin, No. 1	30	6	22	10	10	24.5	.6445	m	cy	m	m	ob	b	w
Dog Ridge	30	5	9	10	18	24.5	.6705	m	cy	m	m	ob	b	w
Herbemont	45	15	5	1½	10	23.2	.6705	m	cy	m	m	ob	b	w
Lenoir	40	8	5½	4	18	23.8	.7530	m	cy	m	m	ob	b	w
Mourvedre × Rupestris, No. 1202	....	3	10	....	3	26.1	.6763	m	cy	m	m	ob	b	w
Riparia × Rupestris, No. 101	30	5	7	2	....	24.6	.6437	m	cy	m	m	ob	b	w
Riparia × Rupestris, No. 3309	30	8	....	....	15	24	.5975	m	cy	m	m	ob	b	w
Rupestris Martin	45	5	7	....	29	25.7	.6144	m	cy	m	m	ob	b	w
Rupestris St. George	50	3	20	½	12	24.9	.6074	m	cy	m	m	ob	b	w
Salt Creek	30	7	18	3	5	24.1	.7065	m	cy	m	m	ob	b	w
Solonis × Riparia, No. 1616	25	15	11	....	4	25.7	.6131	m	cy	m	m	ob	b	w
Taylor Narbonne	30	2	13	2	3	24.7	.6420	m	cy	m	m	ob	b	w
Veltliner:														
Own roots	3	4	4	12	7	26.7	.6345	m	t	l	m	r	r	w
Dog Ridge	50	5	6½	2	18	27.2	.6415	m	t	l	m	r	r	w
Herbemont	35	15	3	2	3	25.6	.7305	m	t	l	m	r	r	w
Lenoir	40	3	1	1	....	23.9	.6356	m	t	l	m	r	r	w
Riparia × Rupestris, No. 3306	....	....	....	....	2	25	.7425	m	t	l	m	r	r	w
Rupestris Martin	30	1½	....	....	3	23.6	.6925	m	t	l	m	r	r	w
Rupestris St. George	40	3	8	½	....	25	.7069	m	t	l	m	r	r	w
Salt Creek	40	....	6	1	....	24	.6850	m	t	l	m	r	r	w
Verdal:														
Own roots	20	5	20	12	....	21.3	.6606	m	t	l	l	ob	w	s, st, t
Dog Ridge	40	3	18	4	3	19.4	.8598	m	t	l	l	ob	w	s, st, t
Do	60	70	8	60	20	21.3	.7479	m	t	l	l	ob	w	s, st, t
Lenoir	60	17	22	10	7	20	.8310	m	t	l	l	ob	w	s, st, t
Rupestris St. George	25	5	14	....	....	20.1	.8300	m	t	l	l	ob	w	s, st, t
Do	50	50	8	40	20	21.9	.6860	m	t	l	l	ob	w	s, st, t
Verdel:														
Own roots	1	8	10	8	5	21.9	.7815	s	cy	c	s	r	b	w
Adobe Giant	30	30	4	12	7	24.3	.5820	s	cy	c	s	r	b	w
Aramon × Rupestris Ganzin, No. 1	15	30	3	15	23	24.2	.6035	s	cy	c	s	r	b	w
Dog Ridge	20	30	6	10	10	22.9	.6975	s	cy	c	s	r	b	w
Mourvedre × Rupestris, No. 1202	30	35	12	25	....	24.8	.6537	s	cy	c	s	r	b	w
Riparia × Rupestris, No. 101	16	10	½	⅓	14	25.7	.4640	s	cy	c	s	r	b	w
Riparia × Rupestris, No. 3309	40	50	5	38	22	24	.6180	s	cy	c	s	r	b	w
Rupestris St. George	30	40	5	12	12	24.8	.6723	s	cy	c	s	r	b	w
Solonis × Riparia, No. 1616	15	5	2	8	5	25.7	.4530	s	cy	c	s	r	b	w
Taylor Narbonne	15	20	6	15	4	24.5	.4935	s	cy	c	s	r	b	w
Verdelho:														
Own roots	8	1½	....	3	3	25.6	.8006	m	t	l	m	ob	w	w
Verdelho de Madere:														
Own roots	....	....	....	2	....	26	.6750	m	t	l	m	ob	w	w
Aramon × Rupestris Ganzin, No. 1	3	3	6	2	....	26.6	.7681	m	t	l	m	ob	w	w
Dog Ridge	2	5	....	9	....	28.9	.7275	m	t	l	m	ob	w	w
Riparia × Rupestris, No. 3309	8	9	5	5	1	26.7	.7165	m	t	l	m	ob	w	w
Rupestris St. George	10	8	5	12	4	27.6	.7245	m	t	l	m	ob	w	w
Solonis × Riparia, No. 1616	8	4	1	3	....	27.6	.7144	m	t	l	m	ob	w	w

TABLE VII.—*Relative behavior and value for different purposes of grape varieties tested by grafting on resistant stocks and by growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and stock (on own roots, if so stated).	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric (grams per 100 c. c.).	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	17	18	19	20	21	22	23	24	25	26	27	28	29	30
						P. cent.								
Vermentino:														
Own roots	10	20	20	8	....	22. 1	0. 5720	m-l	t	m	l	ob	w	w
Adobe Giant	50	35	3	25	18	22. 3	. 5730	m-l	t	m	l	ob	w	w
Aramon × Rupestris Ganzin, No. 1	25	30	5	5	16	22. 7	. 4755	m-l	t	m	l	ob	w	w
Dog Ridge	10	40	10	8	8	22. 7	. 4225	m-l	t	m	l	ob	w	w
Herbemont	....	....	....	....	....	23. 5	. 5647	m-l	t	m	l	ob	w	w
Lenoir	25	15	3	3	6	22. 3	. 4950	m-l	t	m	l	ob	w	w
Mourvedre × Rupestris, No. 1202	20	40	5	15	12	23. 9	. 4865	m-l	t	m	l	ob	w	w
Riparia Gloire	20	30	5	10	2	22. 6	. 4890	m-l	t	m	l	ob	w	w
Riparia × Rupestris, No. 101	15	50	3	38	10	22. 2	. 5670	m-l	t	m	l	ob	w	w
Riparia × Rupestris, No. 3309	50	50	10	25	30	21. 9	. 5370	m-l	t	m	l	ob	w	w
Rupestris Martin	5	4	½	1½	0	24. 4	. 5550	m-l	t	m	l	ob	w	w
Rupestris St. George	50	30	15	20	12	22. 8	. 5057	m-l	t	m	l	ob	w	w
Salt Creek	25	30	1	....	5	22. 9	. 4694	m-l	t	m	l	ob	w	w
Solonis × Riparia, No. 1616	30	30	6	35	12	21. 9	. 4890	m-l	t	m	l	ob	w	w
Taylor Narbonne	12	50	12	35	24	23. 2	. 4455	m-l	t	m	l	ob	w	w
Vernaccia Sarda:														
Own roots	12	6	3	32	16	25. 6	. 8265	m	t	l	m	ob	w	s, st, t, w
Vigne de Zericho:														
Lenoir	4	1½	13	....	....	19. 2	. 7363	l	t	c	l	ob	w	s, st, t
Mourvedre × Rupestris, No. 1202	....	....	24	13	....	22	. 6188	l	t	c	l	ob	w	s, st, t
Wälschriesling:														
Own roots	6	3	3	8	6	25. 8	. 6165	s	cy	c	s	r	w	w
Werme:														
Own roots	4	2	2	3	1	26. 1	. 6120	m	t	t	m	r	w	w
White Hanepoot:														
Adobe Giant	10	10	6	....	7	27. 4	. 5812	m	t	l	l	ob	w	s, st, t, r
Aramon × Rupestris Ganzin, No. 2	....	....	15	....	....	24	. 6900	m	t	l	l	ob	w	s, st, t, r
Australis	....	....	....	6	....	29	. 4425	m	t	l	l	ob	w	s, st, t, r
Berlandieri × Riparia, No. 420A	....	....	....	5	....	31	. 5625	m	t	l	l	ob	w	s, st, t, r
Dog Ridge	15	15	3	20	3	25. 5	. 5565	m	t	l	l	ob	w	t, st, t, r

Hotporup	....	....	....	9½	....	29.5	.4775	m	t	l	l	ob	w	s, st, t, r
Monticola × Rupestris	....	....	....	7	....	27	.5025	m	t	l	l	ob	w	s, st, t, r
Mourvedre × Rupestris, No. 1202	15	10	5	8	3	26	.5650	m	t	l	l	ob	w	s, st, t, r
Riparia × (Cordifolia × Rupestris, No. 106–8)	....	....	....	6	....	28.5	.5250	m	t	l	l	ob	w	s, st, t, r
Riparia × Rupestris, No. 101	....	....	½	5	....	27.5	.5072	m	t	l	l	ob	w	s, st, t, r
Riparia × Rupestris, No. 3306	....	....	....	1½	....	29	.5100	m	t	l	l	ob	w	s, st, t, r
Riparia × Rupestris, No. 3309	10	5	11	12	....	28	.5625	m	t	l	l	ob	w	s, st, t, r
Rupestris Martin	....	....	6	....	....	26	.5700	m	t	l	l	ob	w	s, st, t, r
Rupestris St. George	20	7	5	2	6	25.3	.5790	m	t	l	l	ob	w	s, st, t, r
Rupestris × Berlandieri, No. 219A	....	....	....	5	....	28	.4800	m	t	l	l	ob	w	s, st, t, r
Taylor Narbonne	6	....	....	6	....	27.9	.5572	m	t	l	l	ob	w	s, st, t, r
Viala	....	....	....	4	....	28	.5025	m	t	l	l	ob	w	s, st, t, r
White Tokay:														
Own roots	15	3	2	12	....	25.5	.7294	m	t	l	m	ob	w	s, st, t
Wilmot Hamburg:														
Own roots	50	....	....	....	....	20	.6675	m	t	c	l	r	b	s, t, w
Do	10	1	....	15	....	23.9	.5125	m	t	c	l	r	b	s, t, w
Wilmot, No. 16:														
Own roots	....	....	....	5	....	23	.6900	m	t	c	l	r	b	s, t, w
Dog Ridge	20	13	....	2½	2	21.6	.6844	m	t	c	l	r	b	s, t, w
Lenoir	45	10	9	....	10	20.3	.6206	m	t	c	l	r	b	s, t, w
Rupestris St. George	40	10	8	3	....	23.4	.6487	m	t	c	l	r	b	s, t, w
Zante:														
Own roots	....	15	3	29	....	25	.4850	m	cy	c	v, s	r	b	s, t, r
Zinzillosa:														
Own roots	1	1	1	4	1½	22.5	.7560	m	t	m	m	r	b	w
Zinfandel:														
Own roots	....	....	4	12	3	22.6	.7691	m-l	cy	c	m	r	b	w
Aramon × Rupestris Ganzin, No. 1	30	20	13	12	18	24.2	1.0080	m-l	cy	c	m	r	b	w
Berlandieri × Riparia, No. 420A	....	....	6	....	5	25.5	.9788	m-l	cy	c	m	r	b	w
Dog Ridge	50	8	11½	5	12	23.2	1.1130	m-l	cy	c	m	r	b	w
Herbemont	30	20	7	2	15	22.2	.8640	m-l	cy	c	m	r	b	w
Lenoir	40	15	60	5	15	23.9	1.0260	m-l	cy	c	m	r	b	w
Monticola × Riparia, No. 18815	....	....	3	4	....	23	1.2412	m-l	cy	c	m	r	b	w
Mourvedre × Rupestris, No. 1202	40	4	10	2	8	23.8	.9815	m-l	cy	c	m	r	b	w
Riparia × Rupestris, No. 101	50	8	12	....	6	21.9	1.0025	m-l	cy	c	m	r	b	w
Riparia × Rupestris, No. 101–14	....	....	....	....	5	25	.9000	m-l	cy	c	m	r	b	w
Riparia × Rupestris, No. 3306	....	....	9	4	8	24.6	1.0150	m-l	cy	c	m	r	b	w
Riparia × Rupestris, No. 3309	40	10	8	2	7	22.8	.9870	m-l	cy	c	m	r	b	w
Rupestris Martin	40	8	10	2	8	20.2	.8995	m-l	cy	c	m	r	b	w
Rupestris Metallica	....	....	....	....	3	23	.8625	m-l	cy	c	m	r	b	w
Rupestris Mission	....	....	2	....	5	23	1.0312	m-l	cy	c	m	r	b	w
Rupestris St. George	45	8	13	1	10	22	1.0577	m-l	cy	c	m	r	b	w
Salt Creek	50	5	7	4	4	23.7	.9125	m-l	cy	c	m	r	b	w
Solonis Robusta	....	....	7	1	3	24.3	1.0491	m-l	cy	c	m	r	b	w
Solonis × Othello, No. 1613	....	....	2	....	4	25	.9150	m-l	cy	c	m	r	b	w
Solonis × Riparia, No. 1616	30	10	....	....	3	19.5	.7525	m-l	cy	c	m	r	b	w
Taylor Narbonne	40	8	5½	8	....	23	.9480	m-l	cy	c	m	r	b	w

Table VIII gives an alphabetical list of additional Vinifera varieties grafted on resistant stocks which are under test at the Chico, Colfax, Fresno, Geyserville, Lodi, and Oakville experiment vineyards. Arabic figures are used to indicate the number of different stocks upon which each is grafted and the location of the same. The tests are too young to permit the drawing of conclusions.

TABLE VIII.—*Additional Vinifera varieties of grapes under test on resistant stocks at six experiment vineyards in California.*

[Arabic figures are used to indicate the number of different stocks upon which each variety is grafted and the location of the same.]

Varieties.	Chico.	Colfax.	Fresno.	Geyserville.	Lodi.	Oakville.
Ach-I-Soum						1
Actoni Maceron	1					
Actoniky	1	2	3		4	4
Agadia						1
Agra-Ash						2
Ahmeur bon Ahmeur	2	4			4	5
Ah Saibe						1
Ajaki-Odia	1					
Ajmi	1					5
Ak-Uzum						2
Albardiens	1					
Aldara						1
Alexandria			4			
Alicante	2					
Almeria	1				7	
Amlachu						1
Aneb el Cadi	1	4			4	5
Angelina	2	5			5	7
Aramon	1					
Arecussia						1
Ash Khuta						2
Askaree	1					4
Asmi						6
Atch Gau						2
Aswad Kari						2
Atch Kiek						2
Aturk-Ash						2
Angulata	1	7	1		5	3
Awasarghua						2
Bokator						1
Barducci	2	4	2		5	4
Bermestia Bianca	1					
Bicane	1	5	1		6	5
Black Hamburg	2	2			2	2
Black Monukka	1		18		1	8
Black Morocco	1	7			2	
Black Prince	1					
Black Seedless						3
Black Shahanee	1					5
Blanc d'Ambre	1	4			5	5
Blaney White	1	3			6	9
Blauer Portugieser	1					
Bowood Muscat	1					
Brustiana	2	5			7	8
Buccleugh	1	5			5	8
Buckland	1					8
Calabrian	1	7			7	6
Calmette	1		3			2
Carignane	1					6
Castiza		4			4	5
Chadeh Arabieh	2					6
Chaouch Blanche	1	6			6	5
Chaouch Rose	1	9			8	8
Chasselas Rose de Falloux			1			
Chasselas Rouge	1	2				3
Chasselas St. Bernard	1	2	5		5	4
Chavooschee	1					
Chauche Gris						3
Chaweesh	1					5
Child of Hall	2	5			5	4
Cinsaut	1					
Clairette à Gros Grain	1	6			6	9
Coarna Neagra	2	5			5	6
Corinthe Blanc			9		1	
Corinthe à Gros Grain	1	5	2		6	7
Corinthe Rose	2	6	12		4	7
Coristano	1	8			6	8
Cornichon	2	4	3		6	4
Damas Rose			17			
Danugue	1					
Dattier de Beyrouth						3
Deis-al-A'anze	1				1	6
Dizmar	1					
Dodrelabi	1					
Drnekusa	2					5
Dronkane	1	6	2		10	6
Emathia						1
Emperor	1	3	6		3	9
Erz Roumli	1					5
Fajoumi Jaune	1	5			6	2
Faphly		8	1		9	16
Feher Som	1	7			7	5
Feher Zagos	1					
Ferrara	1	3	25			6
Fintendo	2					
Flame Tokay	1	9	4		4	3
Frankenthal Precoce	2		2			
Fredericton	1	5	1		6	5
Ghulabi						2
Golden Champion						6
Golden Hamburg						5
Golden Queen	1				3	11
Goolabie	1	5	24		2	2
Green Hungarian	1					5
Grenache	1					
Gros Blanc de Lausanne	1	5	1		7	5
Gros Guillaume			24			5
Hebron	1	8			6	10
Huasco			10			
Hunisa	1	6	14			1
Hycales	1	12	1		8	16
Insolia Bianca	2	6	2		6	5
Jauzani						2
Jbâ'i						1
Jeresiana						2
Joannenc						2
Jubeili						6
Kabbajuk						2
Kadarka	1					
Kandihar						2
Kara-sarma						1
Kara-uzum						1
Kharashani						1
Kâsûfi-dakar						2
Kâsûfi-inti						5
Katchitch						1
Kechmish-Aly-Blanc	2	5	2		7	3
Keropodia	1	7	2		7	8
Key	1	2			2	6

TABLE VIII.—*Additional Vinifera varieties of grapes under test on resistant stocks at six experiment vineyards in California*—Continued.

Varieties.	Chico.	Colfax.	Fresno.	Geyserville.	Lodi.	Oakville.	Varieties.	Chico.	Colfax.	Fresno.	Geyserville.	Lodi.	Oakville.
Khudud-ul-Banat	....	....	....	....	....	3	Prune de Cazouls	2	5	23	....	8	5
Kishmish	....	....	....	....	5	2	Purple Damascus	2	6	....	....	....	2
Kishmish Daba	....	....	....	....	....	1	Quagliano	1	....	....	....	....	....
Kishmish Red	....	....	....	....	....	1	Red Hanepoot	....	....	17	....	....	1
Kishmishi	1	....	....	....	....	1	Ribier	1	....	....	....	....	....
Kordash	....	....	....	....	....	2	Rodites	1	11	25	....	7	14
Korsa Kishmish	....	....	....	....	....	1	Ronde Weisse	....	....	....	....	....	1
Ksil-isjum	....	....	....	....	....	1	Rose d'Italie	1	6	....	....	3	4
Kurdi	1	....	....	....	....	1	Roussaou	....	....	2	....	....	....
Kuristi Mici	1	5	2	....	7	4	Saibe	....	....	....	....	....	2
Kurtelaska	1	....	....	....	....	....	St. Macaire	1	....	....	....	....	....
Leani Zolo	2	....	....	....	....	5	Satin Blanc	1	8	....	....	6	8
Lignan	1	2	2	....	....	3	Schiradzouli Violet	1	7	22	....	7	8
Listan	1	....	6	....	....	1	Semillon	....	....	....	....	....	9
Madeleine Royale	....	....	....	....	....	1	Servan Rose	1	6	2	....	7	7
Malvasia	1	6	....	....	4	5	Sev-ursa	....	....	....	....	....	1
Malvasia Rosaria	....	....	....	....	....	1	Sgotoruk	....	....	....	....	....	1
Mantua de Pilas	1	....	....	....	....	....	Shahmani	....	....	....	....	....	5
Maraville de Malaga	1	6	23	....	6	5	Shakaifi	....	....	....	....	....	2
Marmora	1	....	....	....	....	....	Shakaribira	....	....	....	....	....	1
Melon	1	7	....	....	....	1	Shanzi	....	....	....	....	....	1
Meyer No. 64	....	....	....	....	....	1	Shatawi	....	....	....	....	....	5
Meyer No. 114	....	....	....	....	....	2	Shirshira	....	....	....	....	....	1
Meyer No. 115	....	....	....	....	....	1	Sicilien	1	9	1	....	6	11
Meyer No. 801	....	....	....	....	....	3	Slankamenka	2	....	....	....	....	....
Meyer No. 803	....	....	....	....	....	1	S. P. I. No. 601	....	....	....	....	....	1
Meyer No. 832	....	....	....	....	....	2	S. P. I. No. 611	....	....	....	....	....	1
Meyer No. 866	....	....	....	....	....	1	S. P. I. No. 614	....	....	....	....	....	1
Miksâsi	....	....	....	....	....	5	S. P. I. No. 6914	....	....	....	....	....	1
Millenium	1	3	5	....	....	8	S. P. I. No. 30042	....	....	....	....	....	1
Molinera Gordo	2	8	2	....	5	10	Sultana	....	....	1	....	....	2
Monake	....	....	....	....	....	1	Sultanina	....	....	14	....	....	4
Mondeuse	1	....	....	....	....	....	Sultanina Rosea	....	3	38	....	6	22
Mourestel	1	....	....	....	....	4	Suri	....	....	....	....	....	6
Mukhkh-ul-Baghl	....	....	....	....	....	2	Sylvaner	....	....	....	....	....	5
Muscat Albardiens	....	6	....	....	....	....	Syrian	....	....	....	....	3	....
Muscat Bonod	1	6	2	....	9	10	Tavris	....	....	....	....	....	1
Muscat Capusines	1	....	....	....	....	4	Tavrish	....	....	....	....	....	1
Muscat Gros Noir Hatif.	2	....	1	....	....	....	Teneron	1	9	3	....	....	12
Muscat Hamburg	....	....	5	....	....	....	Terret Monstre	1	8	2	....	8	6
Muscat Noir Precoce	1	....	2	....	1	....	Tififihi Ahmer	1	....	....	....	....	3
Nasa Valentiana	1	....	....	....	....	....	Tinta Amerella	1	....	....	....	....	....
Nebbiolo	....	....	....	....	....	1	Trifere du Japon	1	13	2	....	5	15
Ohanez	1	13	48	79	10	6	Triomphe	2	8	....	....	5	8
Olivette Blanche	1	15	5	....	9	17	Trojka	1	....	....	....	....	....
Olivette Chaptal	1	9	1	....	6	10	Ubeide	....	....	....	....	....	6
Olivette Noir	2	10	....	....	6	10	Uva de Casta	....	....	....	....	....	6
Olivette Rose	....	....	1	....	....	....	Uva de Embarque	....	....	....	....	....	6
Opiman	2	3	....	....	4	3	Valandova	....	....	25	....	....	....
Pagadebito	1	....	....	....	....	....	Valdepenas	1	....	....	....	....	....
Palarusa	2	....	....	....	....	....	Veltliner	....	....	....	....	....	11
Panariti	1	....	25	....	....	....	Velusa	....	....	....	....	....	1
Panse de Roquevaire	....	....	....	....	....	5	Verdal	....	2	....	....	1	1
Paykanee Razuki	1	....	....	....	....	....	Verdelho de Madere	....	....	1	....	....	....
Pearl de Casaba	1	....	....	....	3	3	Vigne de Zericho	1	6	22	....	7	6
Pedro Ximines	2	....	....	....	....	....	West Prolific	....	....	....	....	....	4
Perle Imperial Blanche.	2	7	....	....	3	11	White Hanepoot	....	....	10	....	....	....
Peru	1	1	....	....	1	2	White Kapadjulari	....	....	....	....	....	2
Petit Syrah	1	....	....	1	....	3	White Luglienga	1	12	2	....	10	14
Philipi	....	....	....	....	....	1	White Tokay	1	1	....	....	....	2
Piment	1	5	29	....	10	6	Zabalkanski	1	....	....	....	....	3
Pis des Chevre Rouge	1	6	3	....	6	5	Zeine	....	....	....	....	....	6
Pizzutella	2	....	....	....	....	....	Zinfandel	1	....	....	....	....	4

The following is an alphabetically arranged list of Vinifera varieties in the Brawley Experiment Vineyard (Pl. II, fig. 2), the plantings of which are as yet too young to permit the drawing of conclusions relative to their adaptability:

Ach-I-Soum, Actoni, Actoniky, Agadia, Ahmeur bon Ahmeur, Ajmi, Aleatico, Alexandria, Almeria, Aneb-el-Cadi, Angelina, Augulata, Askari, Aspiran Noir, Atch Kiek, Awasarghua.

Barducci, Beclan, Bermestia Bianca, Boal de Madera, Bowood Muscat, Black Morocco, Black St. Peter, Black Shahanee, Black Zante, Blanc d'Ambre, Blaney White, Blauer Portugieser, Buccleuch, Brustiana.

Carignane, Calabrian, Catarratto a la Porta, Castiza, Chadieh Arabieh, Chavooschee, Chaouch, Chaouch Rose, Chasselas Bouches du Rhone, Chasselas Dore, Chasselas Fontainebleau, Chasselas Florence, Chasselas Montauban, Chasselas Musque Vrai, Chasselas Negrepont, Chasselas Rose, Chasselas Rose de Falloux, Chasselas Rouge, Chasselas St. Bernard, Child of Hall, Cinsaut, Clairette à Gros Grain, Clairette Blanche, Coarna Neagra, Commandeur, Corinthe Rose, Corinthe à Gros Grain, Cornichon, Coristana, Crujidero.

Damascus, Danugue, Dattier de Beyrouth, Dizmar, Dodrelabi, Downing, Drnekusa, Dronkane, Duc de Magenta.

Emperor.

Fajaumi Jaune, Faphly, Feher Goher Noir, Feher Som, Feher Zagos, Ferrara, Fintendo, Flame Tokay, Foster, Frankenthal Precoce, Fredericton.

Golden Champion, Golden Hamburg, Golden Queen, Goolabie, Gradiska, Green Hungarian, Grenache, Gros Blanc de Lausanne, Gros Maroc.

Hebron Hycales, Hunisa, Huasco, Hutab.

Insolia Bianca.

Jura Muscat.

Kadarka, Kahallillee, Kakour, Keropodia, Kishmish, Kuristi Mici, Kurtelaska.

Lahntraube, Lampasas, Leani Zolo, Luglienga.

Madeleine Angevine, Madeleine Blanche, Madeleine Rose, Madeleine Royale, Mamelon, Malaga, Malvasia, Malvasia Rosario, Maraville de Malaga, Marascina, Marzamina, Meslier, Millenium, Mission, Molinera Gordo, Mondeuse, Mourisco Bianca, Muscateller, Muscatelle Fino, Muscat Albardiens, Muscat Bonod, Muscat Capusines, Muscat Gros Noir Hatif, Muscat Hamburg, Muscat Madera Rose, Muscat Noir de Hongrie, Muscat Noir Precoce, Muscat Talabot.

Napoleon, Nasa Valentiana, Negrara di Gattinara, Neiretta di Costillo.

Ocru di Boe, Ohanez, Olivette Blanche, Olivette de Cadenet, Oliver de Serres, Olivette Noir.

Pagadebito, Parc de Versailles, Palarusa, Panariti, Paykanee Razuki, Pearl de Casaba, Perruno, Persian, No. 20; Persian, No. 21; Persian, No. 23; Persian, No. 25; Persian, No. 26; Persian, No Number; Persian, No Tag; Philipi, Piment, Pince Muscat, Prune de Cazouls.

Rose de Italie, Royal Ascot, Rozaki Zolo.

Schach-I-Soum, Schiradzouli Blanc, Schiradzouli Violet, Servan Blanc, Servan Rose, Sgotoruk, Shiraz, Sicilian, Slankamenka, St. Laurient, Sultana, Sultanina, Sultanina Rosea, Syrian.

Terret Monstre, Tinta Amerilla, Torok Goher Noir, Trentham Black, Trifere du Japon, Triomphe, Trivoti, Trojka, Trousseau, Tsien Tsien.

Valdepenas, Veltliner, Verdal, Vernaccia Sarda, Vigne de Zericho.

Wilmot Hamburg, Wilmot No. 16, White Corinth, White Tokay.

Zante.

Table IX shows additional tests of improved American native and Franco-American grape varieties grafted on resistant stocks which are being made at the Fresno and Oakville experiment vineyards. (See Pl. I, figs. 1 and 2.) Arabic figures are used to indicate the number of different stocks upon which each is grafted and the location of the same. The tests are too young to permit the drawing of conclusions.

TABLE IX.—*Varieties of American native and Franco-American grapes under test on resistant stocks at the Fresno and Oakville experiment vineyards, showing the number of different stocks included in the test.*

Varieties.	Fresno.	Oakville.	Varieties.	Fresno.	Oakville.
Agawam stocks	1	4	Concord stocks	5	10
America × Malaga No. 2:			Concord Improved do		1
No. 1 stocks		1	Continental do		1
No. 2 do		2	Lindley do	4	11
No. 16 do		1	Lucile do		6
Armistead Seedling do		1	Massasoit do		1
Barry do	1	4	Moore do	1	7
Brighton do	4	6	Niagara do	5	6
Brilliant do		4	Perkins do		1
Campbell do		5	Rebecca do	1	4
Catawba do	1	9	Riggs No. 16 do		1
Champion do		2			

The explanation of columns already given for Table VII will apply for the most part to Table X, showing the relative behavior and value for different purposes of improved American native and Franco-American grape varieties, except that the parentage of the varieties displaces the designation of the stock, the column for the "Year grafted" is omitted, and the congeniality column is changed to a growth-rating column, because all the varieties are on their own roots. The column for weight of pruning is also omitted. The abbreviations used to designate the parent species are as follows: Aest. for Aestivalis, Bourq. for Bourquiniana, Champ. for Champini, Lab. for Labrusca, Lins. for Linsecomii, Rip. for Riparia, Rup. for Rupestris, Vin. for Vinifera.

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California.*

Variety and parentage.	Experiment vineyard.	Year planted.	Growth rating.	How pruned.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
						Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Agawam:			*Per ct.*										
Lab. × Vin.	O	1905	88	s	1 to 3	Mar. 25	Mar. 26	May 15	May 27	May 21	May 31	Sept. 18	Oct. 6
Do.	F	1905	88	s	....	Mar. 5	Mar. 20	May 3	May 20	May 12	May 24	Aug. 29	Sept. 17
Albania:													
Lins. × (Aest. × Lab. × Bourq.)	O	1903	88	s	2 to 4	Mar. 19	Apr. 4	May 22	June 6	May 27	June 20	Sept. 23	
Alicante Ganzin:													
Vin. × Rup.	O	1907	80	s	2 to 3	...do....	Apr. 3	May 20	May 30	May 29	June 12	Sept. 24	Oct. 8
Alicante × Rupestris Terrace, No. 20:													
Vin. × Rup.	O	1903	94	s	1 to 4	Mar. 14	Apr. 1	May 15	May 27	May 27	May 31	Sept. 26	Oct. 7
Do.	Gi	1905	94	s	....	Mar. 8	Mar. 25	May 9	May 24	May 13	May 29	Sept. 18	Sept. 28
Do.	Cx	1906	96	c, s	....	Mar. 17	Apr. 1	June 1	June 8	June 5	June 13	Sept. 15	Oct. 2
Amerbonte:													
Bourq. × (Lins. × Rup.)	F	1903	44	s	....	Mar. 12	...do....	May 20	May 30	May 26	June 3	....	
Do.	C	1907	94	c, s	....	Mar. 28	...do....	May 1	May 20	May 5	June 4	....	
Do.	O	1903	94	s	....	Mar. 20	Apr. 5	June 2	June 8	June 7	June 19	....	
Atoka:													
(Lins. × Rup.) × (Bourq. × Lab.)	F	1903	88	s	....	Mar. 12	Mar. 30	May 12	May 20	May 20	May 25	Aug. 29	Sept. 17
Do.	O	1903	97	s	3 to 5	Mar. 15	Apr. 7	May 22	June 1	May 27	June 20	Sept. 24	
Barry:													
Lab. × Vin.	F	1905	77	s	....	Mar. 7	Mar. 25	Apr. 25	May 12	May 9	May 14	Aug. 15	Sept. 4
Do.	O	1905	77	s	1 to 4	Mar. 30	....	May 15	May 30	May 24	June 1	Sept. 8	
Berckmans:													
Rip. × (Lab. × Bourq.)	F	1904	57	s	....	Mar. 5	Mar. 13	Apr. 25	May 15	May 10	May 21	Aug. 15	Sept. 20
Do.	S	1904	80	s	....	Mar. 16	Apr. 1	May 27	June 25	May 31	June 29	Mar. 30	Oct. 4
Big Extra:													
Lins. × (Lab. × Vin.)	Cx	1907	90	s	....	Mar. 19	Apr. 9	May 1	June 14	May 8	June 20	Sept. 24	Do.
Do.	F	1904	87	s	....	Mar. 8	Apr. 2	May 18	May 27	May 20	June 7	Aug. 30	Sept. 21
Do.	G	1904	85	s	....	Mar. 1	Mar. 28	May 23	June 18	May 27	June 23	Sept. 20	Sept. 28
Do.	Li	1904	67	s	....	Mar. 11	Apr. 3	May 24	June 20	May 28	June 24	Oct. 1	Oct. 10
Do.	L	1904	90	c, s	....	Mar. 10	...do....	May 20	June 8	May 25	June 13	Sept. 24	Oct. 26

Do.	M	1904	93	s	....	Mar. 30	Apr. 8	June 9	June 18	....	June 23	Sept. 26	
Do.	O	1903	87	s	3 to 5	Mar. 20	...do....	May 21	June 8	May 26	June 25	Sept. 10	Sept. 28
Do.	S	1904	89	s	....	Mar. 16	Apr. 10	May 26	June 25	May 30	June 29	Sept. 24	Oct. 15
Blondin:													
(Bourq. × Aest.) × (Lins. × Lab.)	F	1903	53	s	....	Mar. 14	Apr. 1	May 18	May 25	May 22	May 30	Sept. 5	Sept. 17
Do.	O	1903	86	s	1 to 4	Mar. 20	Apr. 8	May 19	June 5	May 23	June 20	Sept. 25	Oct. 12
Bourisquou × Rupestris, No. 601:													
Vin. × Rup	Cx	1906	90	s	....	Mar. 18	Apr. 10	May 3	June 7	May 9	June 11	Sept. 5	Oct. 6
Do.	Gi	1905	87	s	....	Mar. 14	Apr. 1	May 8	May 23	May 12	May 28	...do....	Sept. 25
Do.	F	1903	93	c, s	....	Mar. 8	Mar. 30	May 10	May 18	...do....	May 23	Sept. 6	Sept. 17
Do.	Li	1907	90	s	....	Mar. 14	Apr. 1	May 19	June 5	May 25	June 9	Sept. 25	Oct. 10
Do.	M	1906	65	s	....	Mar. 26	Mar. 29	May 27	...do....	June 1	June 11	Oct. 8	
Do.	O	1903	95	s	1 to 3	Mar. 21	Apr. 3	May 18	May 29	May 23	June 8	Sept. 24	Oct. 8
Bourisquou × Rupestris, No. 603:													
Vin. × Rup	Cx	1906	90	s	....	Mar. 19	Apr. 6	June 2	June 15	....	June 20	Oct. 5	Oct. 6
Do.	F	1904	84	s	....	Mar. 12	Apr. 1	May 15	May 23	May 20	May 27	Sept. 10	Sept. 24
Do.	Li	1905	91	s	....	Mar. 14	Apr. 3	May 10	June 5	May 13	June 10	Sept. 25	Oct. 5
Do.	L	1905	93	s	....	Mar. 11	Mar. 31	...do....	June 3	May 14	June 6	Oct. 8	
Do.	M	1905	79	s	....	Mar. 21	Apr. 4	May 25	June 5	....	June 10	Sept. 23	Oct. 8
Do.	O	1904	92	s	1 to 4	Mar. 22	Apr. 1	May 16	May 28	May 21	...do....	Sept. 29	Oct. 15
Do.	S	1905	87	s	....	Mar. 17	Apr. 5	May 23	June 10	May 26	June 14	Sept. 25	
Bourisquou × Rupestris, No. 109-4:													
Vin. × Rup	Cx	1907	93	s	....	Mar. 16	Apr. 6	May 29	June 1	June 5	June 13	...do....	Oct. 5
Do.	Gi	1907	89	s	....	Mar. 25	Mar. 28	May 7	May 21	....	....	Sept. 5	Sept. 25
Do.	F	1904	93	s	....	Mar. 5	Mar. 24	May 1	May 15	May 18	May 23	Sept. 11	Sept. 22
Do.	Li	1904	94	s	....	Mar. 10	Apr. 5	May 23	June 10	May 28	June 15	Sept. 20	Oct. 1
Do.	L	1904	97	s	....	...do....	Apr. 1	May 9	May 28	May 13	June 1	Oct. 2	
Do.	M	1904	84	s	....	Mar. 28	Mar. 30	May 23	June 8	May 27	June 14	Sept. 26	
Do.	O	1904	98	s	2 to 3	Mar. 17	Mar. 26	May 12	May 24	May 17	May 28	Sept. 23	
Do.	S	1905	98	s	....	Mar. 12	Apr. 3	May 20	June 10	May 25	June 15	Sept. 24	Oct. 15
Bourisquou × Rupestris, No. 3907:													
Vin. × Rup	Cx	1906	91	s	....	Mar. 19	Apr. 9	May 1	June 8	May 7	June 14	Sept. 5	Oct. 4
Do.	Gi	1907	90	s	....	Mar. 12	Mar. 22	May 8	May 23	....	....	...do....	Sept. 22
Do.	F	1904	94	s	....	Mar. 6	Mar. 13	May 5	May 15	May 18	May 26	Sept. 9	Sept. 20
Do.	G	1904	93	s	....	Mar. 2	Mar. 18	May 8	June 7	May 22	June 11	Sept. 25	
Do.	L	1904	97	s	....	Mar. 13	Apr. 2	May 19	June 8	May 24	June 12	....	
Do.	S	1904	87	s	....	Mar. 16	Apr. 10	May 21	June 1	May 25	June 20	Sept. 24	Oct. 14
Bourisquou × Rupestris, No. 4306:													
Vin. × Rup	Cx	1907	94	s	....	Mar. 19	Apr. 8	June 4	June 7	June 8	June 12	Oct. 2	
Do.	F	1904	99	s	....	Mar. 18	Apr. 1	May 8	May 20	May 15	May 25	Sept. 9	Sept. 20
Do.	Li	1907	94	s	....	Mar. 13	Apr. 3	May 19	June 10	May 25	June 15	Sept. 30	Oct. 1
Do.	O	1904	98	s	2 to 4	Mar. 20	Apr. 1	May 20	May 23	May 27	June 5	Sept. 28	
Bourisquou × Rupestris, No. 4308:													
Vin. × Rup	Cx	1906	92	s	....	Mar. 30	Apr. 3	June 4	June 8	....	June 14	Sept. 5	Oct. 2
Do.	Gi	1907	89	s	....	Mar. 10	Mar. 25	May 10	May 23	May 14	....	Sept. 23	
Do.	F	1904	96	s	....	Mar. 14	Apr. 3	May 8	May 18	May 15	May 23	Sept. 8	Sept. 20
Do.	M	1904	85	s	....	Mar. 20	Mar. 26	May 27	June 8	June 2	June 14	Sept. 26	
Do.	O	1904	95	s	2 to 3	Mar. 18	Mar. 29	May 19	May 25	May 30	June 5	Sept. 22	
Brighton:													
Lab. × Vin	O	1905	87	s	2 to 3	Mar. 15	Apr. 7	May 18	May 28	May 24	May 31	Sept. 9	

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage. 1	Experiment vineyard. 2	Year planted. 3	Growth rating. 4	How pruned. 5	Nodes bearing fruit. 6	Growth-starting date. Early season. 7	Growth-starting date. Late season. 8	Blossoming date. Early season. 9	Blossoming date. Late season. 10	Fruit-setting date. Early season. 11	Fruit-setting date. Late season. 12	Fruit-ripening date. Early season. 13	Fruit-ripening date. Late season. 14
Brilliant:			*Per ct.*										
Lab. × (Vin. × Bourq.)	Gi	1905	77	s	....	Mar. 6	Apr. 1	May 26	May 30	June 3	....	Sept. 5	Sept. 25
Do	F	1904	80	s	....	Mar. 12	...do....	May 10	May 20	May 15	May 24	Aug. 20	Sept. 4
Do	G	1905	73	s	....	Mar. 2	Mar. 20	May 22	June 18	May 26	June 23	Sept. 20	
Do	M	1904	84	s	....	Mar. 26	Mar. 31	May 30	June 7	June 10	June 11	Oct. 4	
Canada:													
(Rip. × Lab.) × Vin	F	1903	87	s	....	Mar. 10	Mar. 25	May 10	May 25	May 15	May 30	Sept. 5	Sept. 19
Do	L	1906	88	s	....	Mar. 17	Apr. 15	May 8	May 30	May 12	June 4	Sept. 20	Sept. 22
Do	O	1903	96	s	1 to 3	Mar. 20	Apr. 4	May 19	May 25	May 22	June 10	Sept. 10	Sept. 23
Do	S	1906	93	s	....	Mar. 10	Apr. 12	May 25	June 15	June 19	....	Sept. 24	Sept. 26
Carignane × Rupestris, No. 404:													
Vin. × Rup	F	1904	97	s	....	Mar. 7	Mar. 30	May 10	May 20	May 15	May 26	Sept. 9	Sept. 17
Do	G	1904	95	s	....	Mar. 16	Mar. 20	May 19	June 7	May 24	June 12	Sept. 26	
Do	Li	1905	94	s	....	Mar. 13	Apr. 1	May 23	June 10	June 8	June 14	Sept. 23	Oct. 1
Do	M	1904	87	s	....	Mar. 29	...do....	May 28	June 8	June 2	June 13	Sept. 26	Oct. 8
Do	O	1904	96	s	1 to 3	Mar. 18	Apr. 3	May 22	May 27	May 26	June 1	...do....	Oct. 7
Do	S	1907	89	s	....	Mar. 12	...do....	May 29	June 5	June 4	June 20	Sept. 24	
Carignane × Rupestris, No. 501:													
Vin. × Rup	L	1904	92	s	....	Mar. 7	Mar. 30	May 10	June 3	May 14	June 5	Oct. 26	
Do	M	1904	90	s	....	Mar. 26	Mar. 29	June 3	June 12	June 5	June 17	Oct. 10	
Do	O	1904	95	s	1 to 3	Mar. 16	Apr. 1	May 14	May 18	June 1	June 10	Sept. 27	Oct. 1
Do	S	1907	90	s	....	Mar. 14	Mar. 30	May 27	June 10	...do....	June 14	Oct. 17	
Carman:													
Lins. × (Vin. × Lab. × Bourq.)	F	1904	52	s	....	...do....	Mar. 20	May 21	May 26	May 25	June 3	Aug. 23	Sept. 19
Do	O	1903	74	s	1 to 3	Mar. 16	Apr. 3	May 22	May 31	May 27	June 23	Sept. 10	Sept. 25
Castel, No. 1028:													
Rip. × Vin	O	1907	84	s	2 to 4	Mar. 20	Apr. 6	May 28	May 29	June 2	June 13	Sept. 9	Oct. 6
Castel, No. 19002:													
(Lab. × Rup.) × Vin	O	1907	87	s	2 to 4	Mar. 19	Apr. 1	May 7	May 25	May 21	May 27	Sept. 22	Oct. 9

Catawba:													
Lab. × Vin.	Cx	1906	68	s	....	Mar. 20	Apr. 8	May 26	June 3	May 30	June 8	Sept. 24	
Do	F	1905	68	s	....	Mar. 7	Apr. 1	May 5	May 15	May 17	May 20	Sept. 11	Sept. 15
Do	G	1905	91	s	....	Mar. 10	Mar. 31	May 24	June 5	May 28	June 9	Sept. 26	
Do	L	1905	88	s	....	Mar. 11	Apr. 3	May 12	May 18	May 16	May 27	Sept. 23	Oct. 3
Do	M	1905	87	s	....	Mar. 26	Apr. 10	May 30	June 3	June 3	June 16	Oct. 10	
Do	O	1905	77	s	1 to 4	Mar. 22	Apr. 1	May 17	May 25	May 22	June 11	Sept. 9	Oct. 10
Do	S	1905	90	c, s	....	Mar. 12	Apr. 2	May 20	June 10	May 30	June 14	Sept. 24	Oct. 14
Centennial:													
Lab. × Aest.	Gi	1905	87	s	....	Mar. 15	Apr. 1	May 9	May 27	....	....	Sept. 25	
Do	F	1904	86	s	....	Mar. 13	Mar. 25	May 10	May 18	May 24	May 25	Sept. 5	Sept. 21
Do	O	1905	79	s	2 to 3	Mar. 14	Apr. 1	May 16	May 28	May 21	June 1	Sept. 9	Oct. 6
Champenel:													
Champ. × Lab.	O	1903	94	s	2 to 3	Mar. 22	Apr. 3	May 19	May 24	May 24	June 11	Sept. 27	
Chasselas × Rupestris, No. 901:													
Vin. × Rup.	F	1904	91	s	....	Mar. 6	Mar. 15	May 6	May 16	May 15	May 21	Sept. 8	Sept. 12
Do	O	1904	95	s	1 to 2	Mar. 17	Mar. 25	May 19	May 25	May 24	June 1	Sept. 27	
Clairette Doré Ganzin:													
Vin. × Rup.	F	1903	88	c, s	....	Mar. 9	Apr. 5	May 12	May 20	May 20	May 26	....	
Do	Gi	1905	90	s	....	...do....	Mar. 27	May 26	June 3	May 30	June 9	Sept. 25	Sept. 30
Do	L	1907	78	s	....	Mar. 6	Mar. 20	May 13	May 22	May 18	May 26	Sept. 24	Sept. 27
Do	O	1903	94	s	2 to 4	Mar. 16	Mar. 22	May 20	May 30	May 24	June 4	Sept. 30	Oct. 15
Clevener:													
Lab. × (Rip. × Aest.)	O	1907	83	s	....	Mar. 22	Mar. 30	May 8	May 22	May 12	May 29	Oct. 9	
Cloeta:													
(Lins. × Rup.) × (Lab. × Vin.)	O	1903	90	s	2 to 4	Mar. 21	Apr. 9	May 19	May 29	May 24	June 3	Sept. 24	
Columbaud × Rupestris:													
Vin. × Rup.	O	1903	96	s	2 to 4	Mar. 17	Mar. 25	May 22	May 28	June 1	June 5	Sept. 26	
Concord:													
Lab.	Cx	1906	88	s	....	Mar. 23	Apr. 6	June 1	June 7	June 5	June 12	Oct. 4	
Do	Gi	1905	68	s	....	Mar. 18	Apr. 1	May 26	....	....	....	Sept. 25	
Do	O	1904	76	s	2 to 4	Mar. 17	Mar. 30	May 12	May 28	May 17	June 2	Oct. 7	
Do	S	1904	83	s	....	Mar. 12	Apr. 10	May 20	June 1	June 5	June 7	Sept. 20	
Cornucopia:													
Vin. × Rip.	F	1903	56	s	....	Mar. 1	Apr. 1	May 1	May 10	May 15	....	Sept. 6	
Do	S	1907	88	s	....	Mar. 12	Mar. 27	May 22	June 8	May 27	June 13	Oct. 15	
Couderc, No. 101:													
Vin. × Rip.	Cx	1907	94	s	....	Mar. 15	Apr. 4	May 28	June 4	June 8	June 12	Sept. 15	Oct. 3
Do	F	1904	93	c, s	....	Mar. 8	Mar. 15	May 6	May 24	May 25	May 29	Sept. 10	Sept. 17
Do	G	1904	93	s	....	Mar. 4	Mar. 14	...do....	May 16	May 12	May 21	Sept. 25	Oct. 10
Do	Li	1904	94	s	....	Mar. 9	Mar. 30	May 12	June 8	May 16	June 13	Sept. 24	Oct. 1
Do	M	1904	86	s	....	Mar. 26	Apr. 4	May 29	June 6	June 3	June 10	Sept. 26	Oct. 8
Do	O	1904	93	s	1 to 5	Mar. 18	Mar. 25	May 17	May 25	May 23	May 29	Sept. 25	Oct. 9
Do	S	1904	91	s	....	Mar. 10	Apr. 8	May 20	June 15	May 24	June 19	Sept. 22	Sept. 28
Couderc, No. 201:													
Rip. × (Rup. × Vin.)	Gi	1907	90	s	....	Mar. 17	Mar. 28	May 10	May 25	May 25	....	Sept. 20	Sept. 25
Do	F	1904	98	c, s	....	Mar. 10	Mar. 25	...do....	May 20	May 17	May 25	Sept. 4	Sept. 20
Do	G	1904	95	s	....	Mar. 2	Mar. 22	May 17	June 17	May 21	June 16	Sept. 25	Oct. 10
Do	Li	1905	96	s	....	Mar. 12	Apr. 6	May 23	June 8	May 29	June 12	Sept. 23	Oct. 1
Do	M	1904	87	s	....	Mar. 26	...do....	May 26	June 10	May 31	June 14	Sept. 26	Oct. 8
Do	O	1904	94	s	2 to 5	Mar. 20	Apr. 7	May 18	May 24	May 18	May 31	Sept. 27	Oct. 9
Do	S	1904	90	s	....	Mar. 10	Apr. 5	May 27	June 8	May 31	June 13	Sept. 20	Oct. 7

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Experiment vineyard.	Year planted.	Growth rating.	How pruned.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
						Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Couderc, No. 503:			*Per ct.*										
Rup. × Vin.	Cx	1907	88	s	....	Mar. 18	Apr. 9	June 1	...do....	June 5	June 15	Sept. 26	Oct. 4
Do.	Gi	1907	89	s	....	Mar. 20	Apr. 1	May 18	May 24	May 22	....	Sept. 25	
Do.	F	1904	96	c, s	....	Mar. 13	Mar. 30	May 12	May 23	May 18	May 31	Sept. 6	Sept. 19
Do.	G	1904	85	s	....	Mar. 6	Mar. 20	May 17	June 1	May 21	June 17	Sept. 20	Sept. 25
Do.	Li	1904	93	s	....	Mar. 12	Apr. 5	May 20	June 8	May 24	June 13	Sept. 23	Oct. 1
Do.	M	1904	84	s	....	Mar. 28	Apr. 6	May 28	...do....	June 2	June 12	Sept. 28	Oct. 10
Do.	O	1904	97	s	1 to 5	Mar. 18	Apr. 2	May 17	May 27	May 23	June 9	Sept. 27	Do.
Couderc, No. 704.	S	1904	90	s	....	Mar. 2	Apr. 10	May 22	June 15	May 27	June 20	Sept. 20	Oct. 17
Do.	G	1904	79	s	....	Mar. 6	Mar. 25	May 12	...do....	May 16	...do....	Sept. 25	Do.
Do.	M	1904	73	s	....	Mar. 25	Apr. 1	June 5	June 12	June 13	June 17	Sept. 26	Oct. 8
Do.	O	1904	89	s	1 to 3	Mar. 20	Mar. 27	May 17	June 7	May 23	June 12	...do....	Oct. 9
Do.	S	1904	90	s	....	Mar. 12	Apr. 15	May 26	June 15	May 31	June 20	Sept. 24	Oct. 15
Couderc, No. 3701:													
Vin. × Rup.	Cx	1907	94	c, s	....	Mar. 16	Apr. 5	June 1	June 10	June 5	June 16	Sept. 26	Oct. 4
Do.	G	1904	95	s	....	Mar. 3	Mar. 17	May 15	...do....	May 19	...do....	Sept. 25	Oct. 7
Do.	Li	1904	97	s	....	Mar. 12	Apr. 5	May 25	June 4	May 29	June 9	Sept. 15	Sept. 30
Do.	M	1904	88	s	....	Mar. 28	...do....	May 28	June 5	June 2	...do....	Sept. 27	Oct. 8
Do.	O	1904	96	s	1 to 4	Mar. 20	Mar. 30	May 16	June 3	May 21	...do....	Sept. 25	Oct. 9
Do.	S	1904	92	s	....	Mar. 11	Apr. 5	May 30	...do....	June 8	June 13	Sept. 24	Oct. 7
Couderc, No. 4401:													
Rup. × Vin.	O	1907	89	s	2 to 4	Mar. 20	Apr. 2	May 20	May 23	May 28	June 9	Sept. 22	Oct. 8
Couderc, No. 28 × No. 112:													
Vin. ? × Rup.	Cx	1907	94	c, s	....	Mar. 16	Apr. 5	June 4	June 8	June 8	June 13	Sept. 26	Oct. 3
Do.	F	1904	89	c, s	....	Mar. 10	Mar. 20	May 6	May 16	May 20	May 22	Sept. 5	Sept. 20
Do.	G	1904	96	s	....	Mar. 11	Mar. 23	May 16	June 15	...do....	June 21	Sept. 20	
Do.	Li	1904	91	s	....	Mar. 14	Apr. 5	May 24	June 8	May 29	June 14	Sept. 15	Sept. 30
Do.	L	1904	96	s	....	Mar. 12	Mar. 30	May 8	May 25	May 12	May 30	Sept. 24	
Do.	M	1904	93	s	....	Mar. 26	Apr. 4	Apr. 26	May 30	Apr. 30	June 10	Oct. 8	

Do	O	1904	99	s	2 to 4	Mar. 21	Apr. 1	May 17	May 26	May 23	May 29	Sept. 25	Oct. 5
Do	S	1904	89	s	....	Mar. 10	...do.....	May 31	June 15	June 5	June 20	Sept. 24	Oct. 14
Couderc, No. 71–06: Rup. × (Lins. × Vin.)	O	1907	82	s	2 to 3	Mar. 23	Mar. 27	May 17	June 8	May 21	June 14	Sept. 25	Oct. 10
Couderc, No. 71–20: Rup. × (Lins. × Vin.)	O	1907	85	s	2 to 5	...do.....	Mar. 25	...do.....	June 6	...do.....	June 11	Sept. 21	Oct. 8
Couderc, No. 74–17: Complex Hybrid	O	1907	86	s	1 to 3	Mar. 24	Apr. 1	May 23	May 28	June 1	June 5	Oct. 6	Oct. 10
Couderc, No. 82 × 32: Complex Hybrid	Cx	1907	91	c, s	....	Mar. 25	Apr. 10	May 2	June 12	May 9	June 17	Sept. 25	Do.
Do	F	1904	90	s	....	Mar. 15	Mar. 22	May 15	May 25	May 21	June 1	Sept. 1	Sept. 19
Do	G	1904	95	s	....	Mar. 2	Mar. 25	May 23	June 1	May 27	....	Sept. 20	
Do	Li	1904	88	s	....	Mar. 15	Apr. 5	May 24	June 10	May 29	....	Sept. 15	Sept. 23
Do	M	1904	91	s	....	Mar. 26	...do.....	June 9	June 18	June 22	....	Sept. 28	Oct. 4
Do	O	1904	94	s	....	Mar. 16	...do	May 20	June 10	May 26	June 16	Sept. 22	Oct. 10
Do	S	1904	90	s	....	Mar. 12	Apr. 7	May 28	June 30	June 2	July 3	Sept. 30	Oct. 14
Couderc, No. 84 × 61: (Vin. × Rup.) × Vin	Cx	1907	82	s	....	Mar. 17	Apr. 2	May 26	June 4	June 8	June 11	Sept. 20	Oct. 4
Do	Gi	1907	87	s	....	Mar. 10	Apr. 8	May 20	....	May 30	....	Sept. 15	Sept. 23
Do	F	1904	59	s	....	Mar. 11	Mar. 20	May 12	May 26	May 20	May 31	Sept. 8	Sept. 20
Do	G	1904	72	s	....	Mar. 5	Mar. 16	May 16	June 8	...do.....	June 12	Sept. 20	Oct. 8
Do	Li	1904	66	s	....	Mar. 10	Mar. 25	May 26	June 10	May 30	June 14	...do.....	Oct. 1
Do	L	1907	69	s	....	Mar. 3	Mar. 26	May 12	May 29	May 17	June 4	Sept. 24	Oct. 4
Do	M	1904	72	s	....	Mar. 29	Apr. 1	Apr. 26	June 9	Apr. 30	June 19	Sept. 26	Oct. 9
Do	O	1904	37	s	2 to 4	Mar. 20	Mar. 30	May 18	June 10	May 23	June 16	Sept. 27	Oct. 2
Do	S	1904	72	s	....	Mar. 13	May 26	June 1	June 18	June 23	....	Sept. 24	Oct. 17
Couderc, No. 85 × 113: (Vin. × Rup.) × Vin	O	1907	86	s	2 to 4	Mar. 24	Apr. 1	May 31	June 1	June 3	June 20	Sept. 23	Oct. 10
Couderc, No. 87 × 115: Vin. × (Rup. × Vin.)	Cx	1907	89	s	....	Mar. 16	Apr. 5	June 1	June 18	June 5	June 23	Sept. 15	
Do	Gi	1907	83	s	....	Mar. 8	Apr. 1	May 6	May 14	May 10	....	Sept. 5	Sept. 23
Do	F	1904	91	s	....	Mar. 12	Mar. 20	May 15	May 25	May 25	May 29	Aug. 24	Sept. 19
Do	G	1907	92	s	....	Mar. 2	Mar. 25	May 16	June 5	May 20	June 12	Sept. 23	Oct. 10
Do	Li	1907	88	s	....	Mar. 9	Mar. 30	May 26	June 18	May 29	June 22	...do.....	Oct. 1
Do	M	1904	93	s	....	Mar. 27	Apr. 3	Apr. 25	June 9	Apr. 29	June 23	Sept. 24	Oct. 7
Do	O	1904	88	s	1 to 2	Mar. 18	Apr. 1	May 17	June 7	May 22	June 12	Sept. 26	Oct. 9
Do	S	1907	88	s	....	Mar. 12	...do.....	May 29	June 22	June 2	June 27	Sept. 24	Oct. 17
Couderc, No. 124 × 30: Vin. × (Rup. × Vin.)	G	1907	87	s	....	Mar. 7	Mar. 28	May 10	May 25	....	....	Sept. 25	
Do	F	1904	87	s	....	Mar. 10	Mar. 25	May 14	May 24	May 20	May 29	Sept. 9	Sept. 17
Do	G	1904	90	s	....	Mar. 2	Mar. 30	May 21	June 15	May 25	June 20	Sept. 25	
Do	Li	1904	91	s	....	Mar. 13	Apr. 3	May 12	June 14	May 18	...do.....	Sept. 22	Oct. 5
Do	L	1904	91	s	....	Mar. 14	Apr. 1	...do.....	May 29	May 16	June 3	Sept. 24	Do.
Do	M	1904	82	s	....	Mar. 28	Apr. 2	Apr. 25	June 1	Apr. 29	June 20	Sept. 26	Oct. 8
Do	O	1904	89	s	1 to 3	Mar. 18	Mar. 27	May 17	June 5	May 24	June 10	Sept. 27	Oct. 10
Do	S	1904	86	s	....	Mar. 12	Apr. 1	May 22	June 12	May 27	June 17	Sept. 20	Sept. 25
Couderc, No. 132–11: Complex Hybrid	O	1907	85	s	1 to 3	May 24	Mar. 25	May 26	June 3	May 30	June 9	Sept. 27	Oct. 30
Couderc, No. 199–88: Vin. × (Rup. × Vin.)	O	1907	78	s	1 to 2	Mar. 25	....	...do.....	May 31	May 24	June 4	Sept. 25	Oct. 5
Couderc, No. 241–125: Vin. × (Rup. × Vin.)	O	1907	87	s	2 to 4	Mar. 27	Mar. 28	...do.....	June 6	May 30	June 13	Sept. 24	Oct. 8

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Experiment vineyard.	Year planted.	Growth rating.	How pruned.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
						Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Coudero, No. 267-27:			*Per ct.*										
Complex Hybrid	O	1907	88	s	2 to 3	Mar. 21	Mar. 24	May 24	May 30	May 27	June 5	Sept. 30	Oct. 15
Coudere, No. 272-60:													
Complex Hybrid	O	1907	90	s	1 to 4	...do.....	Apr. 3	May 26	May 29	May 31	June 4	Sept. 22	Oct. 8
Delaware:													
Lab. × Bourq. × Vin	F	1904	52	s		Mar. 6	Mar. 30	May 10	May 20	May 15	May 28	Aug. 5	Sept. 20
Do	L	1904	65	s		Mar. 11	Apr. 10	May 16	June 8	May 20	June 13	Sept. 25	
Diamond:													
Lab. × Vin	Gi	1905	80	s		Mar. 10	Apr. 8	May 9	May 21	May 14	May 25	Aug. 29	Sept. 10
Do	F	1905	69	s		Mar. 7	Apr. 1	...do.....	May 17	May 15	May 22	Sept. 19	
Do	O	1905	66	s	2 to 3	Mar. 20	Apr. 6	May 19	May 31	May 23	June 4	Sept. 8	
Diana:													
Lab. × Vin. × Aest	Gi	1905	84	s		Mar. 11	Apr. 3	May 9	May 21	May 13	May 25	Sept. 11	Sept. 19
Do	O	1905	86	s	2 to 4	Mar. 14	Apr. 1	May 24	May 31	May 28	June 2	Sept. 8	Oct. 9
Dutchess:													
Lab. × Vin. × Aest	Cx	1906	80	s		Mar. 17	Apr. 6	Apr. 26	June 8	May 3	June 14	Sept. 10	Sept. 26
Do	F	1905	69	s		Mar. 6	Mar. 13	May 10	May 16	May 20	May 25	Aug. 29	Sept. 5
Do	L	1905	88	s		Mar. 9	Mar. 30	May 20	June 1	May 25	June 6	Sept. 24	
Do	O	1905	91	s	1 to 4	Mar. 12	Apr. 1	May 19	June 7	May 21	June 12	Sept. 9	Oct. 3
Do	S	1905	88	s		Mar. 15	Apr. 7	May 25	June 18	May 30	June 23	Sept. 20	Oct. 16
Elvira:													
Rip. × Lab	Gi	1905	79	s		Mar. 10	Apr. 3	May 20	May 21	May 25	May 26	Sept. 1	Sept. 22
Do	F	1904	83	s		Mar. 7	Mar. 30	May 8	May 14	May 12	May 19	Aug. 24	Sept. 21
Do	L	1904	90	c, s		Mar. 10	Apr. 2	May 10	May 22	May 14	May 26	Sept. 24	Sept. 27
Do	O	1904	64	s	2 to 3	Mar. 15	Mar. 29	May 2	May 27	May 5	May 30	Oct. 7	Oct. 7
Fern Munson:													
Lins. × (Vin. × Lab.)	Cx	1910	91	c, s		Mar. 20	Apr. 2	Apr. 25	June 12	Apr. 30	June 17	Sept. 20	Oct. 4
Do	O	1903	86	s	3 to 6	Mar. 16	Apr. 3	May 21	June 2	May 26	June 7	...do.....	Oct. 1
Do	S	1904	88	s		...do.....	...do.....	May 29	June 18	June 1	June 23	Sept. 24	Oct. 16

Gold Coin:													
Aest. × Lab.	F	1904	60	s	....	Mar. 23	Apr. 8	May 12	May 30	May 20	June 6	Sept. 5	Sept. 19
Do.	G	1904	79	s	....	Mar. 7	Apr. 5	May 18	June 14	June 18	....	Sept. 20	Oct. 7
Do.	O	1904	67	s	3 to 4	Mar. 16	Apr. 8	May 30	June 1	June 3	June 15	Sept. 25	
Do.	S	1904	85	s	....	Mar. 10	Apr. 12	May 28	June 18	June 1	June 23	Sept. 24	Oct. 16
Governor Ross:													
Lab. × Vin.	Gi	1904	88	s	....	Mar. 20	Apr. 8	May 20	June 3	May 25	June 10	Sept. 18	
Herbemont:													
Bourq.	Cx	1906	92	c, s	....	Mar. 18	Apr. 3	Apr. 21	June 18	Apr. 28	June 24	Sept. 25	Oct. 4
Do.	Gi	1905	84	s	....	Mar. 10	Apr. 5	May 26	May 31	May 29	May 31	Sept. 19	Sept. 30
Do.	M	1904	87	s	....	Mar. 9	Apr. 1	Apr. 30	May 13	May 4	....	Sept. 26	Oct. 8
Do.	O	1903	84	s	2 to 3	Mar. 22	...do....	May 22	June 5	May 27	June 9	...do....	Oct. 10
Do.	S	1904	78	s	....	Mar. 12	Mar. 25	May 25	...do....	June 8	June 11	....	
Herbert:													
Lab. × Vin.	F	1905	70	s	....	Mar. 5	Mar. 10	May 1	....	May 20	....	Aug. 25	Sept. 10
Do.	O	1905	87	s	....	Mar. 14	Apr. 1	May 18	May 28	May 22	June 1	Oct. 9	
Hexamer:													
Lins. × (Lab. × Vin.)	F	1905	85	....	....	Mar. 9	Apr. 5	May 15	May 20	May 19	May 26	Sept. 9	Sept. 17
Do.	O	1905	89	s	2 to 4	Mar. 15	Apr. 6	May 17	June 12	May 22	June 18	Sept. 8	Oct. 15
Husmann:													
Lins. × (Vin. × Lab.)	O	1906	73	s	2 to 3	...do....	Apr. 2	May 19	June 8	May 24	June 14	Sept. 7	Oct. 6
Imperial:													
Vin. × Lab.	Gi	1905	91	c, s	....	...do....	Apr. 1	May 26	June 6	May 30	June 12	Sept. 25	
Isabella:													
Lab. × Vin.	Cx	1906	91	s	....	Mar. 19	Mar. 31	Apr. 30	June 5	May 6	June 10	Sept. 15	Oct. 2
Do.	Gi	1905	73	s	....	Mar. 10	Apr. 15	May 10	May 23	May 14	May 26	....	
Do.	F	1905	90	s	....	Mar. 5	Mar. 25	May 5	May 14	May 15	May 19	Sept. 12	Sept. 20
Do.	G	1905	91	s	....	Mar. 6	Mar. 18	May 15	June 3	May 21	June 9	....	
Do.	L	1905	88	s	....	Mar. 9	Apr. 1	May 8	May 25	May 11	May 28	Sept. 25	
Do.	M	1905	81	s	....	Mar. 25	Apr. 3	May 28	June 5	June 1	June 10	....	
Do.	O	1905	91	s	1 to 5	Mar. 16	Apr. 1	May 15	May 26	May 21	May 30	....	
Do.	S	1905	97	c, s	....	Mar. 10	Apr. 30	May 20	June 10	May 24	June 15	Sept. 24	Oct. 17
Jaeger:													
Lins. × Bourq.	F	1904	68	s	....	Mar. 15	Apr. 3	May 14	May 22	May 20	May 27	Sept. 5	Sept. 19
Do.	G	1904	87	s	....	Mar. 4	Apr. 5	May 20	June 5	May 28	June 12	Sept. 20	Sept. 25
Do.	L	1904	70	s	....	Mar. 20	Apr. 6	May 12	May 20	May 10	May 24	....	
Do.	O	1903	79	s	1 to 3	Mar. 25	Apr. 2	May 28	June 5	June 3	June 17	Sept. 25	
Jefferson:													
Lab. × Vin.	C	1906	80	s	....	Mar. 31	Apr. 16	May 30	June 3	...do....	June 8	....	
Do.	O	1905	69	s	1 to 3	Mar. 24	Apr. 1	May 16	May 28	May 22	May 31	Sept. 23	Oct. 4
Kiowa:													
Lins. × Bourq.	F	1903	55	s	....	Mar. 10	Mar. 12	Apr. 18	May 3	May 5	May 12	....	
Do.	O	1903	86	s	2 to 3	Mar. 24	Apr. 5	May 28	June 7	June 3	June 12	Sept. 27	
Lampasas:													
Lab. × Aest.	F	1908	91	c, s	....	Mar. 10	Mar. 18	May 8	May 15	May 15	....	....	
Laussel:													
Lins. × (Lab. × Aest.)	F	1904	27	s	....	Mar. 12	Mar. 25	May 5	May 17	May 23	....	Sept. 19	
Lenoir:													
Bourq.	Cx	1906	93	c, s	....	Mar. 23	Apr. 2	June 9	June 12	June 14	June 17	Sept. 10	Sept. 23
Do.	Gi	1905	98	s	....	Mar. 18	Mar. 28	May 25	May 30	May 30	June 5	Sept. 20	Sept. 29
Do.	F	1904	79	s	....	Mar. 14	Mar. 20	May 15	....	May 20	....	Sept. 8	Sept. 12

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Experiment vineyard.	Year planted.	Growth rating.	How pruned.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
						Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Lenoir—Continued.			*Per ct.*										
Bourq	G	1904	95	s		Mar. 2	Mar. 27	May 24	June 5	May 29	June 20	Sept. 22	Oct. 7
Do	Li	1904	94	s		Mar. 8	Mar. 28	May 23	...do	May 28		Sept. 25	Sept. 28
Do	L	1904	96	c, s		Mar. 12	Mar. 31	May 18	May 20	May 25	May 31	Sept. 24	Oct. 3
Do	M	1904	82	s		Mar. 27	Apr. 5	May 26	June 15	May 30	June 20	Sept. 26	Oct. 8
Do	O	1903	98	s	3 to 5	Mar. 16	Apr. 3	May 19	June 1	May 23	June 5	Sept. 29	Oct. 3
Do	S	1904	93	s		Mar. 4	Apr. 2	May 27	June 15	June 1	June 29	Sept. 24	Oct. 16
Lindley:													
Lab. × Vin	Cx	1906	89	s		Mar. 22	Apr. 1	Apr. 30	June 5	May 7	June 20	Sept. 10	Oct. 4
Do	Gi	1905	83	s		Mar. 10	Mar. 28	May 15	May 24	May 20	May 28	Sept. 20	
Do	F	1904	88	s		Mar. 12	Apr. 1	May 9	May 15	May 12	May 21	Aug. 24	Sept. 21
Do	O	1905	93	s	2 to 4	Mar. 16	Mar. 26	May 10	May 27	May 14	June 1	Sept. 9	Oct. 7
Louisiana:													
Bourq	O	1903	57	s	2 to 4	Mar. 20	Apr. 15	May 22	June 10	May 27	June 23	...do	Do.
Do	S	1907	86	s		Mar. 14	Apr. 5	May 30	June 12	June 4		Oct. 10	
Lukfata:													
Champ. × Lab	F	1903	83	s		Mar. 10	Apr. 1	Apr. 3	May 10	May 6	May 14	Sept. 23	
Do	L	1904	88	s		Mar. 5	Apr. 5	May 12	May 25	May 26	May 30		
Do	O	1903	95	s		Mar. 19	Apr. 4	...do	May 23	May 16	May 28		
Manito:													
(Lab. × Vin. × Bourq.) × (Lins. × Rup.)	O	1903	93	s	2 to 3	Mar. 16	...do	May 18	June 1	May 23	June 6	Sept. 10	Sept. 26
Marguerite:													
Lins. × Bourq	G	1904	86	s		Mar. 6	Apr. 3	June 5				Sept. 19	
Do	L	1904	76	s		Mar. 18	...do	May 25	June 5	May 29			
Do	O	1903	91	s		Mar. 19	Apr. 9	June 4	June 10	June 7	June 23		
Do	S	1904	92	s		Mar. 12	Apr. 7	May 29	June 15	June 2	June 30	Oct. 14	
Martha:													
Lab. × Vin	Gi	1905	60	s		Mar. 20	Apr. 15	May 25		June 3		Sept. 25	

Missouri Riesling:													
Rip. × Lab.	F	1904	83	s	....	Mar. 13	Apr. 1	May 8	May 17	May 18	May 22	Sept. 5	Sept. 19
Do.	L	1904	82	s	....	...do.....	Apr. 6	...do.....	May 28	May 12	June 1	Sept. 24	Sept. 25
Do.	O	1904	70	s	1 to 3	Mar. 14	Apr. 3	May 12	May 27	May 17	May 31	Sept. 20	Oct. 5
Mrs. Munson:													
Lins. × Bourq.	O	1905	80	s	3 to 5	Mar. 12	Apr. 6	May 19	June 15	May 23	June 22	Sept. 22	Oct. 1
Muench:													
Lins. × Bourq.	F	1904	87	s	....	Mar. 22	Apr. 1	May 18	May 30	May 22	June 6	Sept. 6	Sept. 19
Do.	O	1903	92	s	3 to 4	Mar. 20	...do.....	May 20	June 1	May 25	...do.....	Sept. 25	Sept. 27
Niagara:													
Lab. × Vin.	Cx	1906	88	s	....	Mar. 19	Apr. 5	May 3	...do.....	May 12	June 7	Sept. 5	Oct. 4
Do.	F	1905	71	s	3 to 7	Mar. 7	Apr. 1	May 6	May 14	...do.....	May 19	Aug. 24	Aug. 26
Do.	O	1905	89	s	1 to 3	Mar. 13	Mar. 25	May 16	May 27	May 20	June 21	Sept. 10	Sept. 21
Oliatatoo:													
(Vin. × Lab.) × (Lins. × (Vin. × Lab.))	O	1907	81	s	2 to 4	Mar. 20	Mar. 30	June 8	June 10	June 12	June 16	Sept. 8	
Pardes:													
Vin. × Rup.	Cx	1907	94	s	....	Mar. 19	Apr. 3	Apr. 27	June 5	May 2	June 11	Sept. 25	Oct. 4
Do.	Gi	1905	98	s	....	Mar. 8	Mar. 25	May 20	May 21	May 24	May 25	Sept. 19	Sept. 26
Do.	F	1904	89	c, s	....	Mar. 5	Mar. 28	May 5	May 15	May 15	May 21	Sept. 8	Sept. 20
Do.	Li	1904	73	s	....	Mar. 7	Mar. 25	May 10	May 28	May 16	June 16	Sept. 15	Sept. 28
Do.	M	1904	53	s	....	Mar. 20	Mar. 29	June 6	June 12	June 11	....	Sept. 25	Oct. 10
Do.	O	1904	93	s	2 to 4	Mar. 18	Mar. 25	May 15	May 28	May 20	June 3	Sept. 26	Oct. 9
Do.	S	1904	95	s	....	Mar. 14	Mar. 27	May 26	June 10	May 31	June 14	Sept. 24	Oct. 14
Pierce:													
Lab. × Vin.	L	1905	88	s	....	Mar. 11	Apr. 3	May 4	May 18	May 7	May 23	...do.....	Oct. 2
Do.	M	1905	85	s	....	Mar. 27	Apr. 1	May 21	June 8	May 26	June 13	Oct. 6	
Do.	S	1905	92	s	....	Mar. 14	Apr. 5	May 23	June 3	May 27	June 9	Sept. 30	
Rebecca:													
Lab. × Vin.	F	1905	63	s	....	Mar. 9	Apr. 1	May 6	May 18	May 18	May 23	Aug. 25	Aug. 30
Do.	M	1905	81	s	....	Mar. 28	Apr. 6	June 3	June 8	June 11	June 16	Oct. 4	
Do.	O	1905	69	s	1 to 3	Mar. 19	Apr. 3	May 12	May 24	May 16	May 29	Sept. 9	Oct. 10
Do.	S	1905	84	s	....	Mar. 13	Apr. 5	May 28	June 15	June 1	June 18	Sept. 24	Oct. 16
Rommel:													
Lab. × (Rip. × Vin.)	F	1904	84	s	....	Mar. 9	Mar. 25	May 7	May 18	May 15	May 23	Aug. 10	Sept. 20
Do.	L	1904	86	c, s	....	Mar. 18	Apr. 3	May 10	May 27	May 14	June 1	Sept. 24	Oct. 5
Do.	S	1907	89	s	....	Mar. 12	Apr. 1	May 24	June 28	May 28	July 1	Oct. 17	
R. W. Munson:													
Lins. × (Lab. × Vin.)	C	1906	90	c, s	....	Mar. 27	Apr. 8	May 8	May 20	May 7	June 4	....	
Do.	Cx	1906	80	s	....	Mar. 23	Apr. 5	May 1	June 10	May 9	June 15	....	
Do.	Gi	1907	80	s	....	Mar. 9	...do.....	May 18	May 26	....	....	....	
Do.	F	1904	83	s	....	Mar. 6	Apr. 1	May 12	...do.....	May 18	May 31	Aug. 24	Sept. 15
Do.	G	1904	91	s	....	Mar. 4	Apr. 3	May 22	....	May 29	....	....	
Do.	Li	1904	71	s	....	Mar. 10	Apr. 1	June 2	June 15	June 8	June 20	....	
Do.	L	1904	78	s	....	Mar. 11	Apr. 3	May 13	May 18	May 17	May 23	....	
Do.	M	1904	92	s	....	Mar. 29	...do.....	June 8	June 14	....	June 19	....	
Do.	O	1903	91	s	2 to 5	Mar. 22	...do.....	May 18	May 30	May 24	June 4	Sept. 26	
Do.	S	1904	85	s	....	Mar. 13	Apr. 12	May 26	June 20	May 31	June 25	....	

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Experiment vineyard.	Year planted.	Growth rating.	How pruned.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
						Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Seibel, No. 1:			*Per ct.*										
Rup. × (Lins. × Vin.)	C	1907	93	s		Mar. 29	Apr. 13	May 2	May 20	May 27			
Do	Cx	1907	91	s		Mar. 19	Apr. 2	May 30	June 3	June 5	June 8	Sept. 26	Oct. 15
Do	Gi	1905	94	s		Mar. 15	Apr. 1	May 20	May 26	May 25	June 2	Sept 16	Sept. 28
Do	F	1904	74	s		Mar. 11	...do	May 5	May 25	May 15	May 31	Aug. 20	Sept. 15
Do	G	1904	90	s		Mar. 4	...do	May 21	June 18	May 25	June 24	Sept. 24	Sept. 30
Do	Li	1904	48	s		Mar. 14	Apr. 5	May 15	June 15	May 20	June 20		
Do	L	1904	89	s		Mar. 13	Apr. 1	May 13	June 4	May 17		Sept. 20	Oct. 3
Do	M	1904	63	s		Mar. 27	Apr. 4	June 9	June 15		June 20	Sept. 26	Oct. 8
Do	O	1904	86	s		Mar. 21	Mar. 30	May 15	June 5	May 20	June 10	Sept. 28	Oct. 9
Do	S	1904	91	s		Mar. 16	Apr. 10	May 21	June 18	May 25	June 23	Sept. 24	Oct. 12
Do	St	1907	86	s		Mar. 20	Apr. 1	May 15	June 1	May 20	June 5		
Seibel, No. 2:													
Rup. × (Lins. × Vin.)	C	1910	93	s		Mar. 28	Apr. 6	May 16	May 27	May 21	June 1		
Do	Cx	1907	90	s		Mar. 24	...do	June 5	June 9	June 10	June 14	Sept. 24	Oct. 5
Do	Gi	1905	92	s		Mar. 20	Mar. 30	May 20	May 27	May 24	June 4	Sept. 18	Sept. 25
Do	F	1904	78	s		Mar. 10	Mar. 20	May 13	May 25	May 20	May 30	Aug. 23	Do.
Do	G	1904	82	s		Mar. 6	Apr. 1	May 28	June 10		June 14		
Do	Li	1904	41	s		Mar. 14	...do	May 16	June 20	May 20	June 25	Sept. 25	Oct. 5
Do	L	1904	88	s		Mar. 12	Mar. 30	May 19	June 3	May 22	June 10	Sept. 23	
Do	M	1904	82	s		Mar. 28	Apr. 6	May 26	...do	June 1	June 9	Sept. 25	Oct. 8
Do	O	1904	82	s	2 to 4	Mar. 21	Mar. 25	...do	May 31	May 30	June 2	Sept. 28	Oct. 9
Do	S	1904	82	s		Mar. 17	Apr. 8	...do	June 18	...do	June 22	Sept. 25	Oct. 12
Do	St	1907	87	s		Mar. 15	Mar. 25	May 15	June 2	May 20	June 7		
Seibel, No. 14:													
Rup. × (Lins. × Vin.)	C	1906	92	s		Mar. 31	Apr. 10	May 26	June 1	May 30	June 6		
Do	Cx	1906	95	s		Mar. 20	Apr. 5	May 4	June 12	May 11	May 17	Sept. 5	Sept. 23
Do	Gi	1905	93	s		Mar. 9	Mar. 25	May 9	May 27	May 13	May 30	Sept. 19	Sept. 25
Do	O	1904	84	s		Mar. 17	Apr. 1	May 19	May 29	May 24	June 3	Sept. 20	Oct. 9

Seibel, No. 29:													
Rup. × (Lins. × Vin.)	O	1907	88	s	2 to 4	Mar. 25	Apr. 12	June 1	June 15	June 5	June 20	Sept. 26	Oct. 15
Seibel, No. 38:													
Rup. × (Lins. × Vin.)	C	1906	93	s	....	Mar. 27	Apr. 21	May 20	June 1	....	June 7	....	
Seibel, No. 60:													
Rup. × (Lins. × Vin. × Rup.)	O	1907	70	s	....	Apr. 5	....	May 29	June 8	June 2	June 12	....	
Seibel, No. 70:													
Rup. × (Lins. × Vin. × Rup.)	O	1907	81	s	2 to 5	Mar. 19	Apr. 1	May 26	June 5	June 1	June 10	Sept. 25	Oct. 10
Seibel, No. 78:													
Rup. × (Lins. × Vin.)	O	1907	80	s	2 to 5	Mar. 26	Mar. 28	...do.....	June 8	...do.....	June 14	Sept. 23	Oct. 2
Seibel, No. 80:													
Rup. × (Lins. × Vin.)	O	1907	89	s	2 to 5	Mar. 24	...do.....	May 21	May 30	May 25	June 5	Sept. 24	Oct. 7
Seibel, No. 128:													
Rup. × (Lins. × Vin.)	O	1907	83	s	2 to 4	...do.....	Apr. 1	May 26	June 11	June 1	June 16	Sept. 21	Oct. 8
Seibel, No. 156:													
Rup. × (Lins. × Vin.)	O	1907	84	s	2 to 3	Mar. 21	Apr. 3	May 27	June 7	...do.....	June 13	Sept. 23	Oct. 15
Seibel, No. 209:													
Rup. × (Lins. × Vin.)	O	1907	82	s	2 to 4	Mar. 25	Mar. 28	May 31	June 12	June 4	June 18	Sept. 24	Oct. 8
Seibel, No. 215:													
Rup. × (Lins. × Vin.)	C	1906	93	s	....	Mar. 30	Apr. 10	May 16	June 3	May 21	June 9	....	
Do	Gi	1905	76	s	....	Mar. 20	Mar. 30	May 25	....	....	....	Sept. 15	Sept. 20
Do	O	1907	86	s	2 to 4	Mar. 21	Apr. 3	May 26	June 9	June 1	June 14	Sept. 22	Oct. 27
Seibel, No. 334:													
Rup. × (Lins. × Vin. × Rup.)	O	1907	78	s	2 to 5	Mar. 24	Mar. 28	May 5	June 8	May 30	...do.....	Sept. 23	Do.
Seibel, No. 1004:													
Rup. × (Lins. × Vin.)	O	1907	82	s	2 to 5	Mar. 16	Apr. 10	May 28	June 10	June 2	...do.....	Sept. 22	Oct. 6
Seibel, No. 1070:													
Rup. × (Lins. × Vin.)	O	1907	86	s	2 to 5	Mar. 22	Apr. 2	May 27	...do.....	June 1	...do.....	Sept. 20	Oct. 9
Seibel, No. 1077:													
Rup. × (Lins. × Vin.)	O	1907	81	s	3 to 5	Mar. 26	Apr. 10	May 29	June 15	June 2	June 21	Sept. 29	Oct. 7
Seibel, No. 2010:													
Rup. × (Lins. × Vin.)	O	1907	82	s	2 to 5	Mar. 24	Mar. 30	May 24	June 3	May 28	June 8	Sept. 30	Oct. 15
Seibel, No. 2029:													
Rup. × (Lins. × Vin.)	O	1907	86	s	2 to 5	Apr. 8	....	May 28	June 18	June 1	June 23	Sept. 24	
Seibel, No. 2033:													
Rup. × (Lins. × Vin.)	O	1907	85	s	2 to 3	Mar. 22	Mar. 24	May 24	June 5	May 28	June 10	Sept. 28	Oct. 10
Seibel, No. 2043:													
Rup. × (Lins. × Vin. × Rup.)	St	1910	69	s	....	Mar. 5	Mar. 29	May 17	May 27	May 20	May 31	....	
Seibel, No. 2044:													
Rup. × (Lins. × Vin. × Rup.)	O	1907	88	s	1 to 5	Mar. 24	Apr. 1	May 22	May 30	May 26	June 6	Sept. 23	Oct. 15
Seibel, No. 2056:													
Rup. × (Lins. × Vin. × Rup.)	O	1907	89	s	3 to 5	Mar. 26	...do....	May 26	...do....	May 30	June 3	Sept. 30	Oct. 9
Shala:													
Lins. × (Rup. × Lab.)	C	1903	90	s	....	Mar. 31	Apr. 17	May 5	May 20	May 9	May 25	....	
Do	O	1903	90	s	....	Mar. 19	Apr. 5	May 19	June 2	May 23	June 7	....	
Winchell:													
Lab. × (Aest. × Vin.)	O	1905	80	s	....	Mar. 21	Apr. 2	June 3	June 7	June 5	June 12	....	
Wine King:													
(Aest. × Lab.) × (Lins. × Rup.)	C	1907	97	s	....	Mar. 31	Apr. 8	May 4	May 30	May 9	June 4	....	
Do	O	1903	93	s	2 to 4	Mar. 16	Apr. 3	May 19	May 31	May 25	June 3	....	

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Experiment vineyard.	Year planted.	Growth rating.	How pruned.	Nodes bearing fruit.	Growth-starting date.		Blossoming date.		Fruit-setting date.		Fruit-ripening date.	
						Early season.	Late season.	Early season.	Late season.	Early season.	Late season.	Early season.	Late season.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Worden:			*Per ct.*										
Lab.	C	1906	72	c, s	....	Mar. 30	Apr. 20	May 8	May 20	....	May 26	....	
Do	Cx	1906	81	s	....	Mar. 25	Apr. 5	June 1	June 5	June 5	....	Sept. 20	Sept. 30
Do	F	1905	67	s	....	Mar. 15	...do....	May 5	May 30	....	June 4	Aug. 29	Sept. 15
Do	G	1905	56	s	....	Mar. 5	Apr. 3	May 15	June 1	....	June 6	....	
Do	L	1905	72	s	....	Mar. 11	Apr. 5	May 10	May 23	May 14	May 28	....	
Do	M	1905	74	s	....	Mar. 26	Apr. 6	May 25	June 8	May 30	June 13	Sept. 9	
Do	O	1905	47	s	1 to 2	Mar. 18	Apr. 5	May 17	May 30	May 23	June 5	...do....	
Do	S	1905	80	s	....	Mar. 11	Apr. 8	May 25	June 9	June 8	June 12	....	
Wyoming Red:													
Lab.	F	1905	71	s	....	Mar. 7	Mar. 25	May 8	May 20	May 12	May 24	Aug. 25	Sept. 5
Do	G	1905	82	s	....	Mar. 2	...do....	May 24	June 5	May 28	June 10	....	
Do	Li	1905	45	s	....	Mar. 11	Apr. 5	May 25	June 1	June 4	June 5	....	
Do	L	1905	66	s	....	...do....	Apr. 1	May 10	May 27	May 14	May 29	....	
Do	M	1905	70	s	....	Mar. 30	Apr. 5	June 5	June 7	June 10	....	....	
Do	O	1905	85	s	1 to 3	Mar. 18	Mar. 30	May 16	May 25	May 23	June 2	....	
Do	S	1905	82	s	....	Mar. 16	Apr. 5	May 24	June 18	May 27	June 22	....	
Xlnta:													
(Lins. × Rup.) × (Vin. × Lab.)	C	1907	80	s	....	Mar. 29	Apr. 17	May 2	May 10	May 7	May 20	....	
Do	F	1903	61	s	....	Mar. 5	Mar. 25	May 10	May 15	May 15	...do....	....	
Do	O	1903	76	s	2 to 3	Mar. 16	Apr. 1	May 18	June 5	May 24	June 18	Sept. 20	Oct. 1

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Agawam:						*Per ct.*								
Lab. × Vin.	2	...	...	...	1½	24.6	0.655	m	cy	c	m, l	r	r	s, st, t
Do	3	4	¼	...	...	22.5	.6175	m	cy	c	m, l	r	r	s, st, t
Albania:														
Lins. × (Aest. × Lab. × Bourq.)	4	...	...	...	...	24.6	.4425	l	t	m	m	r	w	w, s, st, t
Alicante Ganzin:														
Vin. × Rup.	6	3	...	...	16	24.2	.8920	l	t	c	m	r	b	w
Alicante × Rupestris Terrace, No. 20:														
Vin. × Rup.	50	8	...	...	...	25.2	.6913	s	cy	c	s	r	b	w
Do	20	5	15	...	...	24.7	.5425	s	cy	c	s	r	b	w
Do	...	1½	8	10	...	25.6	.86	s	cy	c	s	r	b	w
Amerbonte:														
Bourq. × (Lins. × Rup.)	...	...	...	...	...	...	...	l	t	m	s	r	r	w, s, t
Do	...	...	...	...	...	...	...	l	t	m	s	r	r	w, s, t
Do	...	...	...	...	...	...	...	l	t	m	s	r	r	w, s, t
Atoka:														
(Lins. × Rup.) × (Bourq. × Lab.)	10	6	...	2	2	28.8	.8022	l	t	m	s	r	r	w, s, t
Do	8	...	...	...	...	24.9	.9155	l	t	m	s	r	r	w, s, t
Barry:														
Lab. × Vin.	...	...	1	1	...	25.5	.6525	m	cy	m	l	r	b	s, st, t
Do	...	...	...	...	...	25.2	.7875	m	cy	m	l	r	b	s, st, t
Berckmans:														
Rip. × (Lab. × Bourq.)	...	...	½	½	...	25.5	.8588	m	cy	c	m	r	r	w, st, t
Do	...	...	1	...	...	23	.825	l	cy	c	m	r	b	w, st, t
Big Extra:														
Lins. × (Lab. × Vin.)	...	¼	...	2	...	25.8	.8362	l	cy	c	m	r	b	w, st, t
Do	8	...	2	16	1	22.4	.6631	l	cy	c	m	r	b	w, st, t
Do	...	...	1	...	2½	22	.9825	l	cy	c	m	r	b	w, st, t
Do	...	...	1	...	...	21	.8025	l	cy	c	m	r	b	w, st, t
Do	...	½	...	1	...	20.6	.9358	l	cy	c	m	r	b	w, st, t
Do	...	2	...	...	...	23.2	1.2006	l	cy	c	m	r	b	w, st, t
Do	10	5	...	...	...	22.9	.8075	l	cy	c	m	r	b	w, st, t
Do	...	4	...	...	1	23.8	.8581	l	cy	c	m	r	b	w, st, t
Blondin:														
Bourq. × Aest.) × (Lins. × Lab.)	4	3	½	...	...	22.6	.6617	l	cy	c	m	r	w	w, t
Do	6	...	5	...	...	24.3	.5737	l	cy	c	m	r	w	w, t

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Bourisquou × Rupestris, No. 601:						*Per ct.*								
Vin. × Rup.			2	7½		25.5	1.0537	l	t	m	s	r	b	w
Do	15		8	13		23.9	.7571	l	t	m	s	r	b	w
Do	15	25	10		16	25.5	.8631	l	t	m	s	r	b	w
Do			7	2		22.5	1.117	l	t	m	s	r	b	w
Do				3		22	.9825	l	t	m	s	r	b	w
Do	30	15	10	5		23.2	1.1381	l	t	m	s	r	b	w
Bourisquou × Rupestris, No. 603:														
Vin. × Rup.			2	4		21.5	.737	l	t	m	s	r	b	w
Do	15	18	10	4	23	21.3	.8155	l	t	m	s	r	b	w
Do			4			21	1.2225	l	t	m	s	r	b	w
Do				6		22	.9112	l	t	m	s	r	b	w
Do		3		6		20.1	.94	l	t	m	s	r	b	w
Do	20		6		24	21	.9187	l	t	m	s	r	b	w
Do		4	3		16	23.6	.7631	l	t	m	s	r	b	w
Bourisquou × Rupestris, No. 109-4:														
Vin. × Rup.			1			27	.93	l	t	m	s	r	b	w
Do			4	6		20	.8437	l	t	m	s	r	b	w
Do	15	20	10	13		27.1	.9693	l	t	m	s	r	b	w
Do		1½	5	1		25	1.0858	l	t	m	s	r	b	w
Do						26	.9525	l	t	m	s	r	b	w
Do		3				23.2	1.1570	l	t	m	s	r	b	w
Do	15					23.2	.6975	l	t	m	s	r	b	w
Do		3	2		8	24.9	.9350	l	t	m	s	r	b	w
Bourisquou × Rupestris, No. 3907:														
Vin. × Rup.			1½	4½		25	1.012	l	t	m	s	r	b	w
Do			½	8		24	.8962	l	t	m	s	r	b	w
Do	20	20	10	8	8	25.2	.8846	l	t	m	s	r	b	w
Do					9½	32	1.1250	l	t	m	s	r	b	w
Do								l	t	m	s	r	b	w
Do		5	2		5	24.4	.7631	l	t	m	s	r	b	w
Bourisquou × Rupestris, No. 4306:														
Vin. × Rup.				2		25	1.02	m	cy	m	s	r	b	w
Do	6			20		23.6	.9295	m	cy	m	s	r	b	w
Do			1	½		22	1.005	m	cy	m	s	r	b	w
Do	12					23.8	.75	m	cy	m	s	r	b	w

Bourisquou × Rupestris, No. 4308:														
Vin. × Rup.			2	4½		24.5	1.113	m	cy	m	s	r	b	w
Do.				5		27	.8625	m	cy	m	s	r	b	w
Do.	10			12		25.6	.8625	m	cy	m	s	r	b	w
Do.	4					21.4	1.4275	m	cy	m	s	r	b	w
Do.	12					25.2	.78	m	cy	m	s	r	b	w
Brighton:														
Lab. × Vin.						22.7	.705	l	t	m	m	r	r	s, st, t
Brilliant:														
Lab. × (Vin. × Bourq.)	4	⅓	1	7		26.1	.6355	m	cy	c	m	r	r	s, st, t
Do.	6		2	2½		26.1	.5825	m	cy	c	m	r	r	s, st, t
Do.			2			21	.6	m	cy	c	m	r	r	s, st, t
Do.			½			26	.975	m	cy	c	m	r	r	s, st, t
Canada:														
(Rip. × Lab.) × Vin.	15	15	½	2		23.1	.7031	m	cy	c	m	r	b	s, st, t
Do.		1		2		28.4	.7791	m	cy	c	m	r	b	s, st, t
Do.	15		9		10	25	.7800	m	cy	c	m	r	b	s, st, t
Do.		6	6		22	23.4	.8337	m	cy	c	m	r	b	s, st, t
Carignane × Rupestris, No. 404:														
Vin. × Rup.	7	25	12			22.9	.8033	m	t	m	m	r	b	w
Do.			12		20½	20.8	.7775	m	t	m	m	r	b	w
Do.		2	10	2½		24.1	.8572	m	t	m	m	r	b	w
Do.		6	2	8		22.2	.887	m	t	m	m	r	b	w
Do.	25	5				23.2	.6337	m	t	m	m	r	b	w
Do.			6			23	.712	m	t	m	m	r	b	w
Carignane × Rupestris, No. 501:														
Vin. × Rup.						26	.645	m	t	m	m	r	b	w
Do.				3½		22	.9012	m	t	m	m	r	b	w
Do.	15	3				24.3	.7462	m	t	m	m	r	b	w
Do.					7	23	.6	m	t	m	m	r	b	w
Carman:														
Lins. × (Vin. × Lab. × Bourq.)	3	¼	¼	1		26.6	.5669	m	t	m	m	r	b	w, t
Do.	4		4			24.8	.6275	m	t	m	m	t	b	w, t
Castel, No. 1028:														
Rip. × Vin.	3				3½	25.2	.6100	m	cy	m	m	r	b	w
Castel, No. 19002:														
(Lab. × Rup.) × Vin.	5	7	2		12	25.9	.5970	m	cy	m	m	r	b	w
Catawba:														
Lab. × Vin.		1				28	.57	m	cy	c	m	r	r	w, st, t
Do.	3		½			21.7	.397	m	cy	c	m	r	r	w, st, t
Do.			½			20	.6	m	cy	c	m	r	r	w, st, t
Do.		1		4		25.2	.8925	m	cy	c	m	r	r	w, st, t
Do.				½		21	1.005	m	cy	c	m	r	r	w, st, t
Do.	8		2		2	24.3	.8255	m	cy	c	m	r	r	w, st, t
Do.		5	4		16	23.5	.697	m	cy	c	m	r	r	w, st, t
Centennial:														
Lab. × Aest.				½		23	.9825	s	t	c	m	r	r	w, t
Do.	2	3	3	5		24.3	.6602	s	t	c	m	r	r	w, t
Do.					3½	23.4	.7912	s	t	c	m	r	r	w, t
Champenel:														
Champ. × Lab.	5					22.8	.78	m	cy	c	m	r	b	w, t

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Chasselas × Rupestris, No. 901:						*Per ct.*								
Vin. × Rup.	5		10			26.5	.6337	m	cy	c	m	r	b	w
Do.	8					25	.7275	m	cy	c	m	r	b	w
Clairette Doré Ganzin:														
Vin. × Rup.								l	t	l	m	r	w	w
Do.	4			29		20.4	1.1437	l	t	l	m	r	w	w
Do.		2		2		25.1	.9825	l	t	l	m	r	w	w
Do.	60	20	13	8	42	18.3	1.2255	l	t	l	m	r	w	w
Clevener:														
Lab. × (Rip. × Aest.)					2	25	.7875	s	cy	c	s	r	b	w
Cloeta:														
(Lins. × Rup.) × (Lab. × Vin.)		4				22.9	.66	l	cy	l	m	r	b	w, t
Columbaud × Rupestris:														
Vin. × Rup.	10					21.9	.78	m	t	m	m	r	b	w
Concord:														
Lab.						24	.3975	m	cy	m	m, l	r	b	w, st, t
Do.				4		23	.3525	m	cy	m	m, l	r	b	w, st, t
Do.						22.4	.57	m	cy	m	m, l	r	b	w, st, t
Do.			1/8			26	1.132	m	cy	m	m, l	r	b	w, st, t
Cornucopia:														
Vin. × Rip.	4					25	.825	l	cy	c	m	r	b	st, t
Do.					5	25	.8625	l	cy	c	m	r	b	st, t
Couderc, No. 101:														
Vin. × Rip.		1	3	½		28.3	1.1275	s	cy	c	s	r	b	w
Do.	15	20	5		24	24.4	.8344	s	cy	c	s	r	b	w
Do.			4	⅔	12½	21	.8675	s	cy	c	s	r	b	w
Do.		2	8			25.1	1.0225	s	cy	c	s	s	b	w
Do.		5	4	4		22.3	1.0916	s	cy	c	s	r	b	w
Do.	40	8	10	5	4½	22	1.0355	s	cy	c	s	r	b	w
Do.		4	3		9	26.1	.9693	s	cy	c	s	r	b	w
Couderc, No. 201:														
Rip. × (Rup. × Vin.)			2	15	6	21	.8818	s	cy	c	s	r	b	w
Do.	15	20	8	15	23	24.2	.7935	s	cy	c	s	r	b	w
Do.			1	3	3	19	1.1300	s	cy	c	s	r	b	w
Do.		½	7	½		24	1.1193	s	cy	c	s	r	b	w

Do	....	6	4	4½	....	21.6	1.0716	s	cy	c	s	r	b	w
Do	30	6	11	5	15	26	.9570	s	cy	c	s	r	b	w
Do	....	8	8	....	21	23	1.0423	s	cy	c	s	r	b	w
Coudere, No. 503:														
Rup. × Vin.	....	⅓	3	2	....	23.1	.8	l	t	l	s	r	b	w
Do	....	....	....	8	1	21	.8437	l	t	l	s	r	b	w
Do	20	25	10	37	18	21.8	.8190	l	t	l	s	r	b	w
Do	....	....	2	....	16	19.5	1.042	l	t	l	s	r	b	w
Do	....	3½	10	3	....	23.3	.795	l	t	l	s	r	b	w
Do	....	8	6	18	....	20.4	.8731	l	t	l	s	r	b	w
Do	60	10	14	13	28½	20.8	.736	l	t	l	s	r	b	w
Coudere, No. 704	....	10	6	....	24	23.1	.8137	s	cy	s	s	r	b	w
Do	....	....	8	4	10½	21	.8100	s	cy	s	s	r	b	w
Do	....	8	4	20	....	22.3	.9383	s	cy	s	s	r	b	w
Do	40	8	11	3	20	22.8	.7065	s	cy	s	s	r	b	w
Do	....	8	6	....	16	22.8	.8493	s	cy	s	s	r	b	w
Coudere, No. 3701:														
Vin. × Rup.	....	½	2	4	....	24.6	1.055	m	t	c	m	r	b	w
Do	....	....	5	¾	19½	21	.9000	m	t	c	m	r	b	w
Do	....	3	12	2	....	24.4	.9575	m	t	c	m	r	b	w
Do	....	4	....	9	....	22.1	1.0162	m	t	c	m	r	b	w
Do	25	8	6½	5	8	23.6	.8879	m	t	c	m	r	b	w
Do	....	5	6	....	8	23.6	.9031	m	t	c	m	r	b	w
Coudere, No. 4401:														
Rup. × Vin.	5	2	....	....	2	26	.7075	m	cy	m	s	r	b	w
Coudere, No. 28 × No. 112:														
Vin. ? × Rup.	....	3	4	3	....	23.8	1.1125	m	cy	m	m	r	b	w
Do	10	30	10	33	25	24	.9513	m	cy	m	m	r	b	w
Do	....	....	6	....	18½	21.2	.9712	m	cy	m	m	r	b	w
Do	....	2½	8	1½	....	21.5	1.0856	m	cy	m	m	r	b	w
Do	....	....	....	....	....	25.2	.975	m	cy	m	m	r	b	w
Do	....	....	....	5½	....	22	.9825	m	cy	m	m	r	b	w
Do	10	5	12	....	....	24.5	1.0341	m	cy	m	m	r	b	w
Do	....	3	4	....	13	25	.9631	m	cy	m	m	r	b	w
Coudere, No. 71-06:														
Rup. × (Lins. × Vin.)	4	2	½	....	3½	25	.6543	m	cy	m	m	r	b	w
Coudere, No. 71-20:														
Rup. × (Lins. × Vin.)	3	4	2	4	5	26.6	.8580	m	cy	m	m	r	b	w
Coudere, No. 74-17:														
Complex Hybrid	....	....	....	1½	6	24.5	.6575	m	cy	m	m	r	b	w
Coudere, No. 82 × 32:														
Complex Hybrid	....	½	½	6	....	22.1	.65	m	cy	l	l	o	w	w, t, st
Do	6	8	1½	9	....	22.6	.8819	m	cy	l	l	o	w	w, t, st
Do	....	....	3	....	1½	19	.9458	m	cy	l	l	o	w	w, t, st
Do	....	⅓	2	....	....	24.5	.9937	m	cy	l	l	o	w	w, t, st
Do	....	....	2	¾	....	23	.727	m	cy	l	l	o	w	w, t, st
Do	15	3	6	3	2	21.1	.7800	m	cy	l	l	o	w	w, t, st
Do	....	....	½	....	....	24	.907	m	cy	l	l	o	w	w, t, st
Coudere, No. 84 × 61:														
(Vin. × Rup.) × Vin.	....	1	4	1½	....	25.3	.9425	m	t	m	m	r	b	w
Do	....	....	1½	8	....	24.5	.499	m	t	m	m	r	b	w
Do	20	20	1	5	3	23.3	.6032	m	t	m	m	r	b	w

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Couderc, No. 84 × 61—Continued.						*Per ct.*								
(Vin. × Rup.) × Vin			2	1	3	20.6	.9275	m	t	m	m	r	b	w
Do		½	3	10		24	.7969	m	t	m	m	r	b	w
Do		½		2		23.8	.645	m	t	m	m	r	b	w
Do		6	4	16		21.5	1.077	m	t	m	m	r	b	w
Do		15		1½		22.5	.715	m	t	m	m	r	b	w
Do		6	4		6	26.5	.8468	m	t	m	m	r	b	w
Couderc, No. 85 × 113:														
(Vin. × Rup.) × Vin	6	4	2½	2½		23.7	.8156	m	cy	m	m	r	b	w
Couderc, No. 87 × 115:														
Vin. × (Rup. × Vin.)			1	3		24	.57	l	cy t	l	s	r	b	w
Do			2	4		26	.6562	l	cy t	l	s	r	b	w
Do	20	4		34	21	23.9	.572	l	cy t	l	s	r	b	w
Do			2	1	9	20	.7975	l	cy t	l	s	r	b	w
Do		½	4	2½		23.8	.8925	l	cy t	l	s	r	b	w
Do		6	6	19		24.7	1.0125	l	cy t	l	s	r	b	w
Do	35	10	13	6		21.8	.6224	l	cy t	l	s	r	b	w
Do		6			22	21.7	.7612	l	cy t	l	s	r	b	w
Couderc, No. 124 × 30:														
Vin. × (Rup. × Vin.)				2	12	21.7	.877	m	cy	m	l	r	b	w
Do	25	15	8	7	8	22.3	.9105	m	cy	m	l	r	b	w
Do					11½	19.5	.8937	m	cy	m	l	r	b	w
Do		3	7	4		23	1.0744	m	cy	m	l	r	b	w
Do		1½		6		23.3	.995	m	cy	m	l	r	b	w
Do		6	4	17		21.8	1.1655	m	cy	m	l	r	b	w
Do	40	5	14		28	21.8	.8868	m	cy	m	l	r	b	w
Do		8	4		12	22.3	.9702	m	cy	m	l	r	b	w
Couderc, No. 132-11:														
Complex Hybrid	6	2	2	2	18	22.7	.5106	l	t	m	m	r	b	w
Couderc, No. 199-88:														
Vin. × (Rup. × Vin.)		2	½			26	.6632	m	t	m	m	r	w	w, t
Couderc, No. 241-125:														
Vin. × (Rup. × Vin.)		1			3	26	.7162	m	cy	m	s	r	b	w
Couderc, No. 267-27:														
Complex Hybrid		3	2	½	10	29	.6262	m	cy	m	m	r	b	w

Couderc, No. 272-60:														
Complex Hybrid			3	6	20	28	.6300	m	t	m	m	r	r	w, t
Delaware:														
Lab. × Bourq. × Vin.			2	1		29	.7237	s	cy	c	s	r	r	w, st, t
Do				½		28	.5025	s	cy	c	s	r	r	w, st, t
Diamond:														
Lab. × Vin	1	½			2	25.8	.4350	m	cy	m	l	r	w	st, t
Do				½		22	.57	m	cy	m	l	r	w	st, t
Do						24	.6225	m	cy	m	l	r	w	st, t
Diana:														
Lab. × Vin. × Aest	½	1½				23.4	.585	m	cy	l	m	r	r	w, st, t
Do	10				3	22.9	.468	m	cy	l	m	r	r	w, st, t
Dutchess:														
Lab. × Vin. × Aest		1		½		24	.5025	l	t	m	s	r	w	w, t
Do			½			23.3	.4925	l	t	m	s	r	w	w, t
Do		1				23.4	.5425	l	t	m	s	r	w	w, t
Do	6		½		3½	26.1	.6037	l	t	m	s	r	w	w, t
Do		3	½		4	29	.3635	l	t	m	s	r	w	w, t
Elvira:														
Rip. × Lab	5		1	8	2	29	.5906	m	cy	c	m	r	w	w, t
Do	10	3	3	9	3	24	.5959	m	cy	c	m	r	w	w, t
Do		4		5		26.2	.6175	m	cy	c	m	r	w	w, t
Do		½				23.5	.48	m	cy	c	m	r	w	w, t
Fern Munson:														
Lins. × (Vin. × Lab.)			½	½		24	1.32	l	cy	m	m	r	b	w, t
Do	2		3			24.2	1,3383	l	cy	m	m	r	b	w, t
Do		3			1	25	1.0108	l	cy	m	m	r	b	w, t
Gold Coin:														
Aest. × Lab		2	¼	⅓		23	.5746	m	cy	m	m	r	w	t, st
Do			½	¾	3	22	.7650	m	cy	m	m	r	w	t, st
Do	1					26.6	.445	m	cy	m	m	r	w	t, st
Do		1½			1	23	.607	m	cy	m	m	r	w	t, st
Governor Ross:														
Lab. × Vin				7		30	.7125	l	cy	m	l	o	w	t
Herbemont:														
Bourq			4	1½		23	1.030	m	cy	c	s	r	b	w, st, t
Do		8	4	12		21	.7350	m	cy	c	s	r	b	w, st, t
Do		3		5		22	1,132	m	cy	c	s	r	b	w, st, t
Do	15	2	5	3		23	.8081	m	cy	c	s	r	b	w, st, t
Do						26		m	cy	c	s	r	b	w, st, t
Herbert:														
Lab. × Vin	3	⅓				25	.5587	m	cy	m	l	r	b	st, t
Do					3	22	.6375	m	cy	m	l	r	b	st, t
Hexamer:														
Lins. × (Lab. × Vin.)	4	2				23	1.0532	m	cy	m	m	o	b	w, t
Do	2		5½	1	2	22.4	1.0589	m	cy	m	m	o	b	w, t
Husmann:														
Lins. × (Vin. × Lab.)	2				3	25	.7658	m l	cy	l	l	r	b	w, t
Imperial:														
Vin. × Lab				15	8	20	.6487	l	cy	m	l	r	w	t

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Isabella:						*Per ct.*								
Lab. × Vin	......	2	2	1	......	26	1.658	m	cy	c	m	r	b	st, t
Do	......	......	......	......	......	......	......	m	cy	c	m	r	b	st, t
Do	......	......	½	......	......	18	.587	m	cy	c	m	r	b	st, t
Do	......	......	......	......	......	......	......	m	cy	c	m	r	b	st, t
Do	......	......	......	1½	......	28	.72	m	cy	c	m	r	b	st, t
Do	......	......	......	......	......	......	......	m	cy	c	m	r	b	st, t
Do	3	......	1½	......	......	23	.3037	m	cy	c	m	r	b	st, t
Do	......	......	6	......	22	22	.7837	m	cy	c	m	r	b	st, t
Jaeger:														
Lins. × Bourq	6	......	¼	......	1½	25	.6931	m	cy	c	s	r	b	w
Do	......	......	½	......	3	23	1.027	m	cy	c	s	r	b	w
Do	......	......	......	......	......	......	......	m	cy	c	s	r	b	w
Do	3	......	......	......	......	24.9	.81	m	cy	c	s	r	b	w
Jefferson:														
Lab. × Vin	......	......	......	......	......	......	......	m	cy	c	l	r	r	st, t
Do	3	1	......	......	1	29	.3777	m	cy	m	l	r	b	w, t
Kiowa:														
Lins. × Bourq	......	......	......	......	......	......	......	m	cy	m	l	r	b	w, t
Do	3	......	......	......	......	20.8	.66	s	cy	m	m	r	r	t
Lampasas:														
Lab. × Aest	......	......	......	......	......	......	......	m	cy	c	m	r	b	t
Laussel:														
Lins. × (Lab. × Aest.)	......	......	......	¼	......	23	.5625	l	t	l	s	r	b	w
Lenoir:														
Bourq	......	2	2	......	......	29.2	.977	l	t	l	s	r	b	w
Do	5	5	5	30	10	23.6	1.3334	l	t	l	s	r	b	w
Do	15	6	1	......	......	29.2	.7375	l	t	l	s	r	b	w
Do	......	......	2	2	9	22	.995	l	t	l	s	r	b	w
Do	......	......	1½	5	......	24	1.1212	l	t	l	s	r	b	w
Do	......	1½	......	18	......	24.9	1.1141	l	t	l	s	r	b	w
Do	......	5	......	5½	......	22	1.235	l	t	l	s	r	b	w
Do	15	2	......	......	......	24	1.0575	l	t	l	s	r	b	w
Do	......	6	2	......	4	23.8	.8493	l	t	l	s	r	b	w

Lindley:														
Lab. × Vin	....	½	2	1½	....	26.4	.5000	m	cy	l	m	r	r	w, t
Do	....	....	....	½	1	22.5	.5512	m	cy	l	m	r	r	w, t
Do	8	1	....	5	8	23.1	.4500	m	cy	l	m	r	r	w, t
Do	4	....	....	....	1	23.3	.5300	m	cy	l	m	r	r	w, t
Louisiana:														
Bourq	12	....	5	....	6	25.5	.7350	s	cy	c	s	r	b	w, t
Do	....	....	....	....	2	30	.6325	s	cy	c	s	r	b	w, t
Lukfata:														
Champ. × Lab	....	....	....	1½	....	20	.7275	m	cy	c	l	r	b	t
Do	....	....	....	....	....	....	....	m	cy	c	l	r	b	t
Do	....	....	....	....	....	....	....	m	cy	c	l	r	b	t
Manito:														
(Lab. × Vin. × Bourq.) × (Lins. × Rup.)	3	....	....	....	....	23.6	.7012	m	cy	c	m	r	b	t
Marguerite:														
Lins. × Bourq	....	....	....	....	....	22	.6075	m	cy	c	m	r	b	w, t
Do	....	....	....	....	....	26.5	.90	m	cy	c	m	r	b	w, t
Do	....	....	....	....	....	....	....	m	cy	c	m	r	b	w, t
Do	....	....	....	....	2	26	.9	m	cy	c	m	r	b	w, t
Martha:														
Lab. × Vin	....	....	....	....	....	23	.51	m	t	l	m	r	w	t
Missouri Riesling:														
Rip. × Lab	2	4	1	4	6	23.9	.5791	s	cy	c	s	r	w	w
Do	....	1½	....	½	....	25.6	.6300	s	cy	c	s	r	w	w
Do	3	1	1½	....	....	25.5	.4900	s	cy	c	s	r	w	w
Mrs. Munson:														
Lins. × Bourq	4	½	1	....	....	23.6	.6775	m	cy	l	m	r	b	t
Muench:														
Lins. × Bourq	4	6	2	8	4	25.7	.6790	m	cy	c	s	r	b	w
Do	2	....	4	....	....	23.9	.8662	m	cy	c	s	r	b	w
Niagara:														
Lab. × Vin	....	....	1	1½	....	26	.51	m l	cy	m	l	r	w	w, st, t
Do	1½	½	½	....	....	25.8	.485	m l	cy	m	l	r	w	w, st, t
Do	4	....	....	....	3	25.6	.7275	m l	cy	m	l	r	w	w, st, t
Oliatatoo:														
(Vin. × Lab.) × (Lins. × (Vin. × Lab.))	....	....	....	....	....	25.6	.8625	m	t	l	m	r	w	w, t
Pardes:														
Vin. × Rup	....	....	3	3½	....	23.5	.8925	m	cy	m	s	r	b	w
Do	20	5	5	15	....	22.9	.825	m	cy	m	s	r	b	w
Do	15	....	5	23	20	22.4	.65	m	cy	m	s	r	b	w
Do	....	1½	4	2	....	25.3	.9262	m	cy	m	s	r	b	w
Do	....	....	½	2½	....	22.5	.8612	m	cy	m	s	r	b	w
Do	25	3	11	4	10	23.8	.9725	m	cy	m	s	r	b	w
Do	....	4	4	....	15	25.1	.8775	m	cy	m	s	r	b	w
Pierce:														
Lab. × Vin	....	2	....	1½	....	24.1	.6208	m	cy	c	l	o	b	st, t
Do	....	....	....	2	....	21	.9825	m	cy	c	l	o	b	st, t
Do	....	6	1	....	....	19.7	.9187	m	cy	c	l	o	b	st, t
Rebecca:														
Lab. × Vin	1½	....	....	....	....	24.6	.5137	m	cy	m	s	o	w	t
Do	....	....	....	7	....	26	.75	m	cy	m	s	o	w	t
Do	6	....	....	....	3	22.2	.4012	m	cy	m	s	o	w	t
Do	....	4	2	....	11	23	.6244	m	cy	m	s	o	w	t

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Rommel:						*Per ct.*								
Lab. × (Rip. × Vin.)	6	3	5	6	6	25	.4925	m	cy	l	l	r	w	w, t
Do		2½		2		23.1	.5362	m	cy	l	l	r	w	w, t
Do					8	23	.975	m	cy	l	l	r	w	w, t
R. W. Munson:														
Lins. × (Lab. × Vin.)								m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Do	3	¼	½			26.2	.5975	m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Do	2					26.6	.7513	m-l	cy	l	l	r	b	w, t
Do								m-l	cy	l	l	r	b	w, t
Seibel, No. 1:														
Rup. × (Lins. × Vin.)								m	cy	l	l	r	b	w
Do		2	1	6½		37	.7918	m	cy	l	l	r	b	w
Do	18	15	15			22.8	.9081	m	cy	l	l	r	b	w
Do	30	7	2	5	1	26	.5580	m	cy	l	l	r	b	w
Do			4		14	22	.9037	m	cy	l	l	r	b	w
Do						24.7	.705	m	cy	l	l	r	b	w
Do		3		4		28.1	.765	m	cy	l	l	r	b	w
Do		2	3	7		22.2	.9986	m	cy	l	l	r	b	w
Do	50	5		9		25.1	.7437	m	cy	l	l	r	b	w
Do		10	3		6	25.4	.8418	m	cy	l	l	r	b	w
Do								m	cy	l	l	r	b	w
Seibel, No. 2:														
Rup. × (Lins. × Vin.)								m	cy	l	l	r	b	w
Do		2	3	5½		26	1.1766	m	cy	l	l	r	b	w
Do	25	18	18			24	1.2825	m	cy	l	l	r	b	w
Do	30	6	2	18	3	26	.7290	m	cy	l	l	r	b	w
Do			2	4½	23½	20	.7225	m	cy	l	l	r	b	w
Do			⅛			25	.9487	m	cy	l	l	r	b	w

Do		3		7		25.5	1.1737	m	cy	l	l	r	b	w
Do		3	4	6		23.1	1.0991	m	cy	l	l	r	b	w
Do	50	2	6	3	4	23.5	1.115	m	cy	l	l	r	b	w
Do		8	½		3	24	1.0177	m	cy	l	l	r	b	w
Do								m	cy	l	l	r	b	w
Seibel, No. 14: Rup. × (Lins. × Vin.)								m	cy	l	l	r	b	w
Do		1	1			29	.960	m	cy	l	l	r	b	w
Do	20	6		8		23	.7750	m	cy	l	l	r	b	w
Do	15		10		10	24	1.3325	m	cy	l	l	r	b	w
Seibel, No. 29: Rup. × (Lins. × Vin.)	2	3	½	3	13	24	.8895	s	cy	c	s	r	b	w
Seibel, No. 38: Rup. × (Lins. × Vin.)								s	cy	c	s	r	b	w
Seibel, No. 60: Rup. × (Lins. × Vin. × Rup.)								s	cy	c	s	r	b	w
Seibel, No. 70: Rup. × (Lins. × Vin. × Rup.)	5	3	2	4	13	25	.9144	s	cy	c	s	r	b	w
Seibel, No. 78: Rup. × (Lins. × Vin.)	4				6	28	.6212	m	cy	c	m	r	b	w
Seibel, No. 80: Rup. × (Lins. × Vin.)	4	4			18	26.2	.6725	m	cy	c	m	r	b	w
Seibel, No. 128: Rup. × (Lins. × Vin.)	1½	2			8	26	.9335	m	t	m	m	r	b	w
Seibel, No. 156: Rup. × (Lins. × Vin.)	2	1	1½	¼		31	.9518	m	t	m	m	r	b	w
Seibel, No. 209: Rup. × (Lins. × Vin.)		1			9	26	.7912	m	t	m	m	r	b	w
Seibel, No. 215: Rup. × (Lins. × Vin.)								m	cy	m	m	r	b	w
Do	6	10				22.3	.8375	m	cy	m	m	r	b	w
Do	½	4	25	3	6½	24	.8250	m	cy	m	m	r	b	w
Seibel, No. 334: Rup. × (Lins. × Vin. × Rup.)	2		1		6	25	1.150	l	cy	c	m	r	b	w
Seibel, No. 1004: Rup. × (Lins. × Vin.)	4	4	1½	3	11	23	.9555	l	cy	m	m	r	b	w
Seibel, No. 1070: Rup. × (Lins. × Vin.)	5	5	3		9	23	.9593	l	cy	m	m	o	b	w
Seibel, No. 1077: Rup. × (Lins. × Vin.)	1				6	21	.7275	m	cy	c	m	r	b	w
Seibel, No. 2010: Rup. × (Lins. × Vin.)		½	1	2	3	23	.8487	s	cy	c	m	r	b	w
Seibel, No. 2029: Rup. × (Lins. × Vin.)		1				27.4	1.155	s	cy	c	m	r	b	w
Seibel, No. 2033: Rup. × (Lins. × Vin.)	3	2	3		12	23.5	.8812	l	cy	c	m	r	b	w
Seibel, No. 2043: Rup. × (Lins. × Vin. × Rup.)								s	cy	c	m	r	b	w
Seibel, No. 2044: Rup. × (Lins. × Vin. × Rup.)	3	1½	2	5	6	26.⅖	1.1535	s	cy	c	m	r	b	w
Seibel, No. 2056: Rup. × (Lins. × Vin. × Rup.)		1			6	23.5	.9750	s	cy	c	m	r	b	w

TABLE X.—*Relative behavior and value for different purposes of improved native American and Franco-American varieties of grapes growing on their own roots in eleven experiment vineyards in California*—Continued.

Variety and parentage.	Weight of fruit per vine (pounds).					Sugar, Balling scale.	Acid, as tartaric, grams per 100 c. c.	Cluster.			Berry.			Use.
	1909	1910	1911	1912	1913			Size.	Shape.	Compact or loose.	Size.	Shape.	Color.	
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Shala:						*Per ct.*								
Lins. × (Rup. × Lab.)								l	cy	c	l	r	b	w, t
Do								l	cy	m	l	r	b	w, t
Winchell:														
Lab. × (Aest. × Vin.)								l	t	l	s	r	w	w, t
Wine King:														
(Aest. × Lab.) × (Lins. × Rup.)								l	cy	c	m	r	b	w
Do						22.8	0.9000	l	cy	c	m	r	b	w
Worden:														
Lab.								m	cy	l	m	r	b	t
Do			½	½		27	.4850	m	cy	l	m	r	b	t
Do	3		¼			23.3	.5325	m	cy	l	m	r	b	t
Do								m	cy	l	m	r	b	t
Do								m	cy	l	m	r	b	t
Do								m	cy	l	m	r	b	t
Do						20.9	.5775	m	cy	l	m	r	b	t
Do								m	cy	l	m	r	r	t
Wyoming Red:														
Lab.	1½	¼	1			24.9	.5300	m	cy	l	m	r	r	t
Do								m	cy	l	m	r	r	t
Do								m	cy	l	m	r	r	t
Do								m	cy	l	m	r	r	t
Do								m	cy	l	m	r	r	t
Do						24.8	.6150	m	cy	l	m	r	r	t
Do								m	cy	l	m	r	r	t
Xlnta:														
(Lins. × Rup.) × (Vin. × Lab.)								l	cy	m	m	r	b	w
Do								l	cy	m	m	r	b	w
Do			4			23	.9375	l	cy	m	m	r	b	w

CONCLUSIONS AND SUGGESTIONS.

Varying soil, climatic, and other conditions complicate the successful establishment of vineyards on resistant stocks.

The adaptability of varieties to soil, climatic, and other conditions can be closely forecasted, but congeniality has to be determined by actual test.

The best results are obtained where the scion and stock are congenial and both are suited to all the conditions of the environment.

When both scion and stock varieties are suited to the conditions but do not thrive, congeniality is probably lacking.

The ideal vine is one having a most resistant root which is congenial to a top that produces the best fruit abundantly.

Different species used as stocks with the same variety grafted on them (Table VII) may increase or diminish its vigor and productiveness; increase or diminish the quality, size, and appearance of the fruit; cause it to ripen earlier or later; and bring about results varying from perfect success to almost complete failure.

Extensive saccharine and acid determinations made (Table VII) of varieties grafted on resistant stocks and contrasted with the congeniality and growth ratings made of the same vines the same season show a close correspondence between these important chemical constituents of the fruit and the congeniality of graft and stock. Similar growth ratings of a variety grafted on various stocks are found to be accompanied by fairly definite percentages of sugar and acid. The congeniality of the variety to the stock materially affects the resistant qualities of the stock.

The quantity and quality of the fruit are usually in opposition on the soils and vines producing most abundantly; the fruit is usually not of as much value per given unit as it is on vines that are relatively less productive.

Most vine varieties making perfect growth on resistant stocks are found to yield heavier crops than the same variety when grown on its own roots.

The best results can be obtained only when the varieties are placed under soil, climatic, and other conditions to which they are adapted and by using the methods of pruning, training, and culture best suited to each one.

A number of the new grape introductions of the Department of Agriculture are proving to be superior to the varieties that are now commercially grown for certain purposes.

The relative rooting qualities of resistant varieties are an important consideration in the cost of establishing resistant vineyards.

Some stocks are suited for bench grafting, while others are especially valuable for vineyard grafting.

Cuttings of many hybrids root easily, although the cuttings from one of the parents may be hard to root.

Where conditions are not suited to a given species, they are often well adapted to hybrids of that species with some other species.

As cuttings of Monticola, Berlandieri, Aestivalis, Linsecomii, Bicolor, and Candicans (Pls. VI, VII, and VIII) are hard to root, they should be rooted in the nursery and grafted there, or planted in the vineyard and grafted afterwards.

Riparia cuttings root easily and are excellent stocks well suited for vineyard and bench grafting, but they are adapted to but few California soils. Soils in which Riparia varieties thrive usually produce large crops of only fair quality.

Rupestris cuttings root and graft easily and are best adapted to bench grafting. When so used the dormant eyes should be cut out of the stock. Many varieties are not congenial to Rupestris, and their fruit is usually somewhat later in ripening than when grown on some other stock.

In most instances Riparia, Berlandieri, Champini, and Aestivalis stocks (Pl. VI, VII, and VIII) are congenial to Vinifera varieties. Their fruitfulness is increased and the time of ripening hastened in comparison with the same varieties grown on other stocks.

Some of the hybrid resistant-stock varieties are making enviable records as stocks under California conditions.

Where all the qualities desired can not be found in a hybrid, a complex hybrid—that is, a hybrid of hybrids—may yield the desired results.

A grower of Vinifera grapes should decide before locating his vineyard what varieties he desires to grow, and then choose soil and other conditions suited to such varieties. He should know whether stocks are to be established in the vineyard and grafted afterwards or whether the plantings are to be of bench or nursery grafts. He should then select the resistant varieties best suited to the purpose and conditions and which at the same time are congenial to the varieties he intends to grow. He should familiarize himself with all the operations necessary in establishing a resistant vineyard.

The amount of money practically thrown away in the reestablishment of Vinifera vineyards in this country since the first appearance of phylloxera in them can not be even approximately estimated.

The direct causes of this waste of money have been due to lack of information and the fact that there was no source from which data could be obtained. This has resulted in the taking of chances by the growers in planting nonresistants, or in using the wrong resistants, or in using resistants which were not congenial to the varieties they were growing. Other causes for this waste have been the purchase of bench grafts on resistant stocks not true to name and the lack of proper care and management of resistant vineyards, such as allowing roots to grow from Vinifera tops grown on resistant stocks. These mistakes have delayed the general use of resistants. There should be no further delay of this kind. The Department of Agriculture is now prepared and will be glad to give information of value along all these lines.

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